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The Nebraska State Medical Journal

Nebraska State Medical Association
Organized 1868
SUUM CUIQUE
1919 Incorporated

VOLUME 36
January 1951 — December 1951

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The Nebraska State Medical Journal

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

Vol. 36 Norfolk, Nebraska, January, 1951 No. 1

EDITORIAL

MEDICAL EDUCATION AND THE NATIONAL EMERGENCY

At the meeting in Cleveland, December 5, the Board of Trustees of the American Association voted the sum of one-half million dollars as direct aid to medical schools of this country. In announcing this action to the House of Delegates at its mid-winter session in Cleveland, Dr. Louis H. Bauer, the chairman of the Board of Trustees of the A.M.A., stated that this appropriation comes from the National Education Campaign Fund which was raised to defend medical freedom. It has been made possible by the widespread public cooperation the profession has received from the American people in its campaign against compulsory health insurance. Quoting directly:

> "The Board of Trustees feels that it is keeping faith with the American people, who have given medicine such a splendid vote of confidence, when it contributes this amount to the medical schools of the Nation . . . There is growing public awareness that federal subsidy has come to be a burden, not a bounty, for it is bringing intolerable increases in taxation, and is dangerously increasing federal controls over our institutions and the lives of our people.
>
> "The Board hopes that this action will become a stimulus to other professions, industries, businesses, labor groups, and private donors to contribute to this very important cause of protecting and advancing the interests of Medical Education and public health. The American Medical Association urges all its members to contribute individually to this cause and we hope that physicians will take the lead in securing contributions from other sources."

The wisdom not to mention the generosity of the Board is commendable. On several occasions in our editorial pages we called the attention of our readers to the financial stress under which most of our medical schools have been operating over the past several years. Recent leaps and bounds in medical progress call for corresponding improvements in the curriculum on the undergraduate level, with reasonable facilities for post-graduate work for physicians interested in these newer developments. To carry out their functions in medical education to the optimum degree calls for budgets which meet not only the necessary enhancement of the curriculum and the improvements in instructional techniques, but even more so the constantly rising costs of every item entering into the scheme of medical education.

We re-emphasize these points at this time for two main purposes:

a. With the declaration of a national emergency the medical schools undoubtedly will be called upon to speed up their curriculum, putting further strains on budgets already close to the breaking point. One need not be a crystal gazer to predict the outcome. To most schools the alternative to closing will be lowering of educational standards or acceptance of federal funds with their customary strings attached. These are always reminders of the ancient exhortation: Beware of the Greeks bearing gifts.

b. Shifting to our own locale we urge the members of our Association to assume an active interest in the affairs of the two medical schools in an effort to relieve the financial needs experienced by both. Every physician whether or not he be conscious of it owes a debt to these institutions. Most of us are alumni of Creighton University School of Medicine or of the University of Nebraska College of Medicine. All of us are benefited by their services and by their influences on our standards of medical practice.

Privately endowed or state supported, each of these two institutions deserves our help and encouragement. We are particularly concerned now with the acute problems of the University of Nebraska College of Medicine and the University Hospital. Restrictions in admission of patients aside from limiting necessary services to the sick poor also reduces the number of desirable cases for clinical instruction. Small as it is for the number of students to accommodate, the hospital cannot long afford to operate with closed wards.

Our Unicameral Legislature will soon be in session. It is hoped that no member of the Nebraska State Medical Association will miss the opportunity to present the current dilemmas of medical education to his local representatives. He will discharge a loyal obligation not only to his profession but as well to the people benefited by its service.

IMMUNIZATION AGAINST TETANUS*

Every physician appreciates the value of immunization. In fact the gauge of medical progress in recent years particularly is not so much in terms of therapeutic achievement through chemical and antibiotic agents as in effective preventive measures attained by active immunization against infection. In simple terms prevention is better than cure. And one of the best illustrations of the effectiveness of this process is the prevention of tetanus. The menacing nature of this disease, with the economic loss and the high rate of mortality, is too well recognized to require emphasis here. Although reliable figures on the incidence of tetanus are not available, it is general knowledge that cases occur far more frequently than may be expected in view of its preventability.

In World War II there was only one case of tetanus reported among the wounded in the United States Army. There were twelve cases which developed in non-combat injuries. Of these six had received no toxoid, two had been given the basic injections but received no toxoid after the injury. Four had had basic doses as well as the toxoid at the time of the injury. By comparison the Japanese Navy reported tetanus at the rate of ten cases for every 100,000 men wounded during the years 1940 to 1944, a period during which routine immunization was not required. The German Army likewise experienced a high incidence of tetanus among their ground troops who either received insufficient or no toxoid. In the battle of Manilla three hundred out of the 400 civilians stricken, died of tetanus.

These data while obviously sketchy nevertheless serve as convincing evidence in favor of immunization. They become particularly significant at this time of international conflict with civilian defense as one of our major problems. It would be well for communities to consider routine immunization against tetanus as one of the logical steps toward minimizing suffering in the event of local disaster. We must consider the situation in terms reality. Immunization is so simple and inexpensive, and the reactions so mild that it is folly to speculate on the advisability of such a project. If the probabilities of direct attack are considered not great, the possibilities of accidental explosions or of havoc resulting from sabotage cannot be dismissed.

The Annual Midwinter Meeting of the Council of the Nebraska State Medical Association will be held at the Hotel Cornhusker, Sunday, February 25, 1951. The meeting will be called to order at 10 a.m.

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*Upon request of The Journal this editorial was prepared by Dr. Harold C. Lueth, Dean of the University of Nebraska College of Medicine, a member of the Committee on Civilian Defense of the American Medical Association.

X-Rays in Obstetrics*

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Time and experience have more clearly defined the limitations as well as the distinct advantages of roentgen diagnosis in obstetrics. Although there is rather uniform endorsement of certain aspects of this subject, much confusion still exists regarding others. This is chiefly due to the fact that some types of x-ray examinations are precisely diagnostic in themselves, while other types require very careful clinical correlation before their usefulness is manifest. Failure to distinguish between these two types of roentgenological findings may cause one to condemn this method unfairly.

The more frequent use of these examinations again raises the question of possible damage to the developing fetus. Although Martin's(1) direct measurements showed an accumulation of less than one roentgen at the uterine cervix with combined AP, lateral and pubic angle films, and Cole's(2) determination of the effective radiation reaching the comparable depth of the ovary in a water phantom gave total readings as high as ten roentgens, neither amount of radiation would seem productive of any detrimental organic changes. Muller(3) and others have objected to diagnostic x-rays in pregnancy because of the possibility of induced genetic changes. The increased mutation rate observed following x-ray exposure of experimental animals is very likely not in excess of those which may be produced by digestion of certain drugs, chemicals, foods, and vapors inherent in our every day living. Since the normal human spontaneous mutation rate is still unknown, the consequences of infinitesimal changes in this rate due to exposure to a variety of physical agents during a lifetime probably can never be accurately evaluated.

The roentgen technique is simple and consists of single or stereoscopic pairs of AP and lateral films of the abdomen and pelvis in the supine, erect or supine decubitus positions. In most instances, films in the erect position are most informative. Great care must be taken to precisely center the patient and tube so that the point of greatest interest will be shown with a minimum of distortion and motion. In pelvimetry studies, the use of a lumbo-sacral pad on the AP view and a supine decubitus lateral view made without moving the patient from the position of the AP projection are highly desirable.

The indications for x-ray examination in obstetrics may be grouped into four divisions of clinical usefulness. Obstetricians are keenly aware of the accuracy of roentgen diagnosis of the conditions in Group I.

TABLE I

A. Survey demonstration of Status Quo in Second Half of Pregnancy (After Molay and Swenson(4)).

a. Diagnosis of pregnancy.
b. Differentiation of other abdominal and pelvic conditions.
c. Anomalies of fetal development.
d. Multiple pregnancy.
e. Age of fetus.
f. Death of fetus.
g. Position and presentation.
h. Hydramnios.
i. Extra-uterine pregnancy.

Although accidental findings and tricks of radiography have detected extremely early evidences of pregnancy, roentgenological studies can not be expected to give dependable evidence of the existence or nonexistence of pregnancy before the eighteenth or twentieth week of gestation. High quality films, devoid of motion and superimposition of shadows are needed for this. The differentiation of abdominal tumors simulating pregnancy can therefore only be done accurately after the fifth month unless other identifying signs are present in the tumor. The same holds true for differentiating pregnancy in obese, amenorrheic women, and in suspected cases of pseudocyesis.

The demonstration of the physical status of the fetus when its skeleton has reached the stage where it is easily seen roentgenographically is most useful and reassuring to the obstetrician. This stage of development coincides with the beginning of the second half of gestation.

Patients with an unsuspected early pregnancy not infrequently present themselves with symptoms of rather abrupt onset of colonic stasis simulating obstruction. The abdominal x-ray shows the mid-line intra-pelvic symmetrical mass which can be readily differentiated clinically from tumor.

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*Read before the Annual Assembly of Nebraska State Medical Association in Lincoln, May, 1950.

Along with differentiation of pregnancy from abdominal and pelvic tumors is the importance of recognition of the co-existence of both entities so that complications may be anticipated. Uterine fibroids and ovarian cysts may develop ischemic necrosis with paralytic ileus. Other masses may jeopardize the course of pregnancy or cause interpositional arrest of fetal descent during delivery.

The roentgen differentiation of hydatid mole from pregnancy depends solely on establishing the presence or absence of a fetal skelton in the uterine mass which has been growing for at least five months. The uterus containing a mole frequently shows an asymmetry not usually seen in pregnancy.

Anomalies of fetal development are usually recognized accidently except that a high percentage show associated hydramnios. Although this condition is probably also prevalent with normal fetal development, any question of it clinically calls for roentgen clarification. Hydrocephalus is the only anomaly which does not tend to deliver prematurely, and care should be exercised to distinguish distortional magnification of an anteriorly placed normal head in the fundus from true hydrocephalus.

Roentgen study usually easily differenciates multiple pregnancy from a large fetus and hydramnios, and the importance lies in detection of fetal death of one twin or the presence of a fetus papyraceous which may seriously complicate delivery.

Age of the fetus is most reliably determined by detection of ossification in the epiphyses of the distal femur and proximal tibia which is present in eighty per cent of fetuses at the end of the eighth month of gestation. Cranial measurements are less reliable unless carefully corrected for about twenty per cent distortion.

When fetal death is suspected, the use of films made with the patient erect are indispensible. The dead fetus falls in a bizarre clumped position in the lower uterine cavity. there is abnormal angulation of the head and spine, and other signs such as overlapping of the cranial bones, depression of parietal bones, and thoracic cage collapse are equally well seen. When an abnormal fetal attitude is encountered on a conventional supine study, the erect film will rule out fetal death by showing a change to a normal breech or vertex presentation. Fetal death may be established within one week of known viability by this method. The so-called "Buddha attitude," characterized by the fetus sitting upright in the uterus with its spine straightened, head partly extended, and arms extended across the upper chest is occasionally seen in cases radiographed shortly before or after death of the fetus has occurred. This attitude is caused by antemortem subcutaneous edema (fetal hydrops).

We also feel that a more accurate analysis of position and presentation of the fetus is afforded by upright roentgenograms, since the gravity effect does not alter true malpositions, whereas it corrects false or temporary malpositions. The persistence of a transverse, brow or face, extended breech or shoulder presentation in the erect and supine AP and lateral views even in a patient several weeks before term demands careful notation to the obstetrician.

The methods of x-ray examination for uterine or abdominal pregnancy depend on whether the fetus has developed to a point where it may be recognized roentgenographically. Ectopic pregnancy usually constitutes a surgical emergency and an x-ray investigation is limited to a supine abdominal survey film. This will frequently show a widening of the soft tissue flank shadows due to the free fluid in the peritoneal cavity. In other abdominal pregnancies before the fifth month, AP and lateral supine films may show a midline soft tissue density of the uterus and an additional more conspicuous density which represents the shadow of the placental implantation in the peritoneal cavity. Where the fetus has developed beyond the fifth month both erect and supine AP and lateral films should be taken. These will demonstrate a fixed asymmetrical position of the fetal skeleton usually accompanied by a separate uterine shadow in the mid-line. A third shadow of the placental implantation may also be visible. In rare cases the fetus lies in the mid-line and the uterus is displaced to the side. In this instance an attempt should be made to demonstrate the absence of a uterine wall about the fetus. The erect films not only aid in showing the failure of the fetus to properly center in the lower uterine segment but also help to demonstrate the features of fetal death. Although a lithopedion characteristically shows a calcareous shell about the fetus, in instances where a non viable fetus has not been present for a sufficient length of time this finding may be absent.

The second group of indications for x-ray examinations is given in Table II.

TABLE II

B. Evaluation of maternal and fetal morphology.
a. Variations in pelvic architecture.
b. Fetal-pelvic relationships.
c. Pelvimetry and cephalometry.

This controversial field deals with the use of x-ray study of the fetal head and maternal pelvis as an adjunct to predicting or determining the presence of dystocia. The chief reason why such x-ray methods are condemned or confusing is because many radiologists and clinicians attempt to base final conclusions of the prognosis of delivery on the linear x-ray measurements of the pelvis and fetal head. The accusation that pelvimetry or cephalometry technics are inaccurate when dystocia occurs after normal roentgen measurements are reported or vice versa is unjust in that such measurements constitute only one important link in the chain of diagnostic considerations necessary to evaluate the need for operative interference. There are innumerable factors concerned in the mechanism of parturition which cannot be determined by the use of roentgen examination, but this does not eliminate it as a source of helpful information to be correlated by the obstetrician with the other findings in each individual case.

Dr. De Lee's(5) comment on the value of x-ray in obstetrical prognosis bears repeating and should be remembered by all physicians.

> "Since the x-ray cannot measure the strength of the pains, or the moldability of the head, or the expansibility of the pelvic joints, or the nudation of the sacrum, or the rigidity of the soft parts, or the nervous mechanism of labor, or the metabolism of a parturient, et cetera, you can see what a small part it plays in the routine conduct of a delivery—but I would not do without it. Although the roentgen eye has taught us much in obstetrics, one must not forget that it is astigmatic and that much thought added to experience is necessary to interpret safely what is seen. For this reason stereos are almost mandatory and even here discernment is advised. A few don'ts may save you from pitfalls. (1) Don't do a cesarean section based on the roentgen film alone. (2) Don't conclude that the head over-rides the pubis unless you have felt it with your fingers. (3) Don't diagnose hydrocephalus from a picture taken with the patient on her back. (4) Don't let the roentgenologist tell you what to do nor no matter how good he is, should you accept his report if his findings disagree with those your obstetric examination reveals. The x-ray report should complement your examination. If it does not, repeat both, and if in doubt refrain from action."

Practically any pelvimetry method is as accurate as another if it is done with the precision advocated by its author. The precision stereoscopic method of Caldwell and Maloy(6) is undoubtedly the most informative in correlating the variations of the pelvic form and fetal pelvic relationships with the undistorted pelvic diameters.

We have found the less expensive isometric methods of Snow-Lewis(7), Colcher-Sussman(8), or Steele Javert(9) accurate for all practical purposes. Simultaneous studies of these three methods on the same patient showed the internal pelvic measurements to compare within six millimeters of each other. The pelvimetry results are subjected to the analytical rules of Mengert(10) or Weinberg(11) to afford classification into normal, borderline, or true bony disproportionate groupings. About twenty-four per cent show borderline changes in the shape or size of the pelvis and seventy-five per cent were normal. Dystocia in the normal cases was not considered due to bony abnormality. Less than one per cent showed true bony disproportion. In none of the borderline cases was the decision for operative delivery based on the pelvimetry measurements alone. Cephalometry was considered accurate only when the fetal head rested directly over the pelvic inlet. X-ray examination of these cases was requested because of disproportion based on external measurements or a past history of dystocia.

The third group of indications for obstetric roentgen diagnosis is given in Table III.

TABLE III

C. Study of Uterine, Fetal and Pelvic Soft Parts.
a. Placental localization.
b. Abruptio placenta.
c. Fetal hydrops.

Placental localization is most efficiently and simply shown by the indirect method of determining whether or not the fetal head centers perfectly over the pelvic inlet in erect AP and lateral films of the pelvis. Failure of the head to center in vertex presentation indicates in over ninety per cent of cases the interposition of a soft tissue mass in the lower uterine segment. In the absence of other masses, this indicates the presence of a central, partial, or marginal placenta previa, a finding which we have found to be ninety per cent accurate. Care must be taken to empty the patient's bladder before this study is made, since a full bladder may dislocate the dependent fetal head.

Additional information can be obtained through the use of both lateral projections of the fundus of the uterus with the patient on her side and a graduated barium paste filter over the x-ray tube aperature. Though not entirely reliable, this method will directly visualize a high percentage of placental implantations on the anterior or posterior wall of the uterus. It fails to identify the inferior limits of the placenta in many instances, however.

A more recent method of placental localization which needs further evaluation from the standpoint of safety is direct abdominal aortography. Approximately twenty c.c. of seventy per cent diodrast or neoiopax is injected through a long eighteen gauge needle into the upper abdominal aorta and a PA survey film made within seven seconds of the beginning of injection. A blood pressure cuff is tightened about each thigh to a level which temporarily occludes both femoral arteries. A short intravenous anesthesia is required during the procedure. This method demonstrates the limits and position of the placental circulation sufficiently well to permit exclusion of placenta previa.

Abruptio placenta is occasionally recognized by plain placentography films of the fundus. The presence of the retroplacental hematoma is manifest by unusual widening of the placental shadow accompanied by obvious displacement of the fetus or a bulging of the uterine wall over the placental site.

Fetal hydrops is identified by the so-called "halo" shadow of edematous soft tissue about the fetal skeleton(12). This condition is seen in erythroblastosis fetalis, diabetes, and other toxemias. The marked soft tissue edema sometimes causes stiffening of the fetal spine and extremities which is seen roentgenographically as the "Buddha-like" attitude of the infant in utero somewhat similar to that seen in fetal death. The recognition of fetal hydrops calls for immediate interruption of pregnancy if the fetus is alive.

The fourth group of indications for obstetrical roentgenography deals with complications following delivery.

TABLE IV

D. Post-partum Complications.
a. Uterine and ovarian tumors.
b. Intestinal obstruction.
c. Post-operative and anesthetic complications.
d. Urinary tract complications.

The occurrence of a symmetrical abdominal mass resembling another pregnancy in the post-partem period calls for x-ray study to determine whether or not this mass is part of the upper female genital tract. Chorioepitheliomas following pregnancy or hydatiform mole are dangerous, but rare. Pyometrium and rapid cystic enlargement of the uterine cavity are occasionally encountered following delivery. The x-ray serves to differentiate a uterine mass from a cystic ovarian tumor and thereby helps in the determination of proper management.

Mechanical small bowel obstructions may follow spontaneous or operative delivery. The abdominal scout film indicates absence of gas in the colon and the distended loops of small intestine. Usually there is a knuckle of bowel adherent to the uterine fundus or caught in the peritoneal cavity during the process of returning from its markedly displaced position during full term pregnancy to its normal location.

Survey films of the abdomen in the postoperative period are useful in determining the presence of paralytic ileus intra-abdominal abscess and complications of the abdominal wall. On rare occasions where cesarean section is done in the presence of chronic uterine sepsis, gas forming bacteria may cause a gas filled cystic abscess of the uterine cavity or form pseudocystic changes in the peritoneal or extraperitoneal tissues. Such changes are best recognized by abdominal roentgenography. Complications of anesthetics are almost entirely confined to the lungs. It is useful to know that chest roentgenograms in a patient having respiratory difficulty following delivery can detect changes due to pulmonary edema as long as twelve to eighteen hours before physical findings are present.

Obstructive hydronephrosis is not infrequently found at this time and is usually more marked on the right side. As would be expected, a certain number of patients are victims of urinary tract infection during this time, which may have progressed rather than regressed during the post-partum period. Patients with congenital urinary tract infection are particularly vulnerable in this regard. Plain films and pyelograms are desirable methods to rule out the presence of anomalies, infected hydronephrosis, renal cortical abscesses, calculi and peranephritic abscess.

SUMMARY

The indications for roentgen diagnosis in obstetrical management embraces four groups of conditions, namely, the status of the development of the second half of pregnancy, evaluation of the maternal and fetal morphology, study of the fetal and uterine soft parts, and post-partum complications.

In the first and last groups, roentgen methods offer rather precise diagnostic information usually unobtainable by other methods.

In the third group considerable improvement in techniques during the past several years has afforded useful and more reliable information concerning placental location and separation. These studies offer the obstetrician a simple efficient method of evaluating the importance of uterine bleeding during pregnancy. The number of cases requiring sterile vaginal examination or operative interference may thereby be reduced to a small group in which the roentgen findings are equivocal or show definite abnormality of the placental form or location. Careful roentgen study of the fetal soft tissues is warranted in all cases of suspected erythroblastosis, diabetic mothers, and severe toxemias to aid in the more prompt election of operative interference when fetal hydrops is present.

In the second group roentgen studies should provide as much information as possible concerning the entire fetal morphology, variation in the form of the maternal pelvis, probable mechanism of cephalo-pelvic adaptation and the linear diameters of the fetal head and pelvis. Except where absolute pelvic disproportion is unequivocally shown, the decision for operative interference should not be based on the cephalo-pelvic diameters alone, regardless of how accurate these may be. If the x-ray findings in Group II are considered as only one of many factors needed in the evaluation of possible dystocia rather than precisely diagnostic findings which in themselves determine or exclude dystocia, this form of examination will play its proper role in obstetrical practice.

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RESINS IN SHOES, FURNISHINGS ARE BLAMED FOR SKIN DISEASE

Many cases of dermatitis affecting the feet and other parts of the body can be blamed on synthetic resins used in the partial linings of shoes and other manufactured items, according to a Buffalo dermatologist.

Writing in the November issue of the Archives of Dermatology and Syphilology, published by the American Medical Association, Dr. James W. Jordon said the many instances of dermatitis on the feet and body traced to synthetic resins and their components "make it evident" that these substances are important skin sensitizing agents.

Dr. Jordon is associated with the Department of Dermatology and Syphilology, University of Buffalo School of Medicine.

"Contact with these substances is almost universal," said Dr. Jordon, pointing out that they are widely used in wood finishes, furniture upholstering materials, varnishes and lacquers, steering wheels, handles, musical instruments, toys, games, sporting goods, wearing apparel, accessories and jewelry.

Cases of dermatitis due to direct contact with hair lacquer pads, spectacle frames, garters and wrist watch bands containing these substances are known, said Dr. Jordon, adding:

"It is evident that many obscure cases of dermatitis, in which no clear-cut history of contact (with resins) is elicited, may be due to these compounds."

In order to establish definitely whether or not a case of dermatitis is due to synthetic resins, Dr. Jordon explained, it is necessary to make patch tests with the actual compound to which the skin has been exposed.

"It is not sufficient in suspected resin dermatitis to test the patient to a sample group of basic resins," he said, adding that "there is one common factor responsible."

Problems in the Newborn*

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This discussion of problems in the newborn is intended as a brief survey of the practical application of current knowledge of young infants. Material has been taken from sources too numerous to mention and an attempt has been made to present it as it applies in actual clinical practice.

It is common knowledge that although there has been a great improvement in the over-all infant mortality for many years, this improvement has been relatively slight in the case of babies under one month of age. The persistent high death rate in infants during the first few days of life continues to present a challenge which has not been adequately met. Since there are rather marked differences in different parts of the country which can hardly be explained entirely on the basis of the racial differences in the population involved, we have some indication that significant improvement is possible.

The most recent figures indicate that the most frequent causes of death in the newborn are prematurity, congenital malformations, pulmonary infections, birth injury and atelectasis in the order named and that together these account for about 75 per cent of the deaths.

It is apparent from many studies that proper care of prematures results in a very striking improvement in their survival rate. It has been repeatedly emphasized that an adequate program for the care of premature infants will produce better results than any known measures directed toward any of the other common conditions occurring in newborn infants. Without attempting to discuss premature care in any detail, there are a few points which seem to be worth emphasizing. There should be adequate provision for keeping the baby warm, starting immediately after birth, and continued until the baby can be placed in a proper incubator. After it is certain that the air passages are open, a minimum of handling and examination is desirable. The routine administration of oxygen seems advantageous for at least 24 to 48 hours. For several reasons, it seems better not to give anything by mouth for at least 24 hours after birth, and then very small amounts of liquid may be given, with increases being permitted only as the baby demonstrates an ability to retain what is given. The need for food the first few days is so slight, and the danger of vomiting and aspiration is so great that it is usually wise to err on the side of too little rather than too much food, particularly during the first week of life.

It is necessary that the physical arrangement be such that the premature infants can be isolated from the others. The importance of aseptic handling of premature infants has been widely recognized but unfortunately compromises have frequently been permitted in this regard in many hospitals. If at all possible, the nurses who care for prematures should not have contact with other patients. If such an arrangement is impossible, there should at least be facilities for utilizing thorough isolation technic at all times. Physicians themselves are frequent offenders in breaking technic in premature nurseries and such breaks should be regarded as being quite as inexcusable as they would be in an operating room.

It seems unnecessary to say that the nurse is the most important member of the team in premature care. A properly trained and qualified nurse if given the proper facilities and equipment and supported by good medical supervision can accomplish a great deal in the care of these infants.

Even though we now know that occasionally environmental factors such as virus infections of the mother early in pregnancy may play a role in congenital malformations, there is no present prospect of any significant reduction in their number. The other principal causes of death are to a considerable extent interrelated and are certainly a part of the hazard of being born. To a limited extent, prematurity and birth injury and aspiration may be reduced by good obstetrics but it is not to be expected that they will be greatly reduced in the immediate future. It seems obvious that improvement in the outlook of newborn babies must be based upon improvement in our knowledge of the physiology and pathology of this age period.

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*Read before the Annual Assembly of the Nebraska State Medical Association in Lincoln, May, 1950.

It is apparent to anyone who sees newborn infants that most of their serious difficulties are shown, at least in part, by difficulties in breathing. The establishment of respiration is the most important and immediate change after birth and may be interfered with by a variety of circumstances. It has been known for some time that the fetus carries out limited respiratory movements even early in pregnancy. If there is any intrauterine anoxia, either during labor or before, these respiratory excursions may become sufficiently great that a considerable amount of amniotic fluid may be aspirated and result in the deposition of irritating vernix on the bronchial mucosa. This occasionally results in marked interference with the expansion of the lungs later. The possibility of aspiration of mucus during passage through the birth canal is too well known to require comment. Such premature attempts to breathe are particularly apt to occur if the oxygen supply to the baby is reduced in any way prior to delivery.

The need for quick removal of fluid and mucus from the upper air passages immediately after delivery is generaly recognized. There is not such general agreement upon the need for intratracheal aspiration. Since there is some possibility of producing trauma, it should perhaps be reserved for infants showing some definite indication for the procedure.

Difficulties in resuscitation of the newborn can frequently be explained on the basis of diminished sensitivity of the respiratory center. This is most frequently due either to an excess of sedation in the mother or to some intracranial birth injury. The increasing anoxia present under such circumstances tends further to depress the sensitivity of the respiratory center and clearly indicates the need for oxygen to interrupt the vicious circle. There is still some difference of opinion as to the virtue of added carbon dioxide with the oxygen. We have had the distinct impression that at times the use of 5 per cent carbon dioxide with oxygen is better than oxygen alone. This has been particularly true in the case of infants who have repeated episodes of cyanosis associated with some evidence of inadequate expansion of the lungs.

Since the possibility of intracranial damage is always present in the case of an asphyxiated infant, extreme gentleness in handling should be emphasized no matter what type of artificial respiration is used. We believe that the positive pressure inhalator, while at times most valuable, is also capable of producing damage by over-inflation of the partially expanded portion of the lungs. We have had one case in which death was due to a pneumothorax which evidently was related to such over-distention.

Certain of the less obvious congenital malformations may result in symptoms during the early newborn period and in those that are surgically correctible, a prompt diagnosis is a matter of great importance. During the past few years, a successful method of operation for atresia of the esophagus has been developed and our experience leads us to believe that it is not a rare condition and that a considerable percentage of them may be cured if properly handled. Many types are encountered but the majority of these have the upper esophagus ending in a complete atresia with the lower esophagus joined to the trachea or a main bronchus. This naturally results in the prompt regurgitation of any fluids given by mouth and, quite frequently, the aspiration of part of this fluid into the trachea and lungs. In the common type with a fistula between the stomach and bronchi, the lungs are further damaged by the gastric juice which is drawn into them. This fistulous communication also allows air to get into the stomach and intestines and sometimes results in abnormal and even dangerous distention of the abdominal viscera. The condition should be suspected in any infant who regurgitates promptly after the first fluids are given, and especially if some choking is provoked at the same time. The well known tendency of many normal young babies to vomit and regurgitate to some extent no doubt contributes to the failure of the physician to appreciate the importance of this regurgitation when a lesion is actually present. The question as to the importance of early regurgitation can usually be settled very easily by the passage of a catheter. If obstruction is encountered before the catheter reaches the stomach, it is almost certain that atresia exists. If there is doubt about the diagnosis, x-ray studies may be helpful. A plain film of the chest and abdomen may be sufficient by indicating an absence of any other lesion in the chest and by showing whether gas is or is not present in the stomach and intestine. Evidently, the need for further corroboration is frequently felt and is done by giving an opaque substance to visualize the defect in the esophagus. If iodized oil is used, it gives good visualization of the defect in the esophagus and if some of it spills over into the trachea, no harm is done. Unfortunately, in a good many suspected cases, barium has been used in the x-ray study before we have seen them and although the visualization is good, it has frequently been aspirated into the lungs with disastrous consequences. Barium is evidently an extremely dangerous foreign substance in the lungs and leads to a slowly progressive inflammatory reaction which in our experience has always been fatal in small babies. We believe that barium should never be used for gastro-intestinal study in young infants pecause of their marked tendency to vomit and aspirate some of the material. After a diagnosis of esophageal atresia is made, nothing more should be given by mouth so that further opportunity for aspiration may be minimized.

Since the need for fluid and food is not pressing in young babies, there is always time to make thorough preparation for the operation and to do whatever is necessary to get the baby in the best possible condition for it. In this connection, it should be emphasized that over-hydration is to be avoided.

We have recently encountered three patients who have had a fistulous communication between the esophagus and trachea but without atresia. It seems entirely likely that this condition is much more common than we have realized and that a diagnosis of pneumonia has served to explain a death where the underlying condition was actually a simple fistula which might very well have been corrected surgically. The condition is suggested by consistent choking after swallowing fluids and in some cases by the development of marked abdominal distention resulting from the air forced down the esophagus through the fistula. The demonstration of the fistula by x-ray has been difficult and uncertain because of the uncertainty as to whether the iodized oil which may pass from the esophagus into the trachea has gone through the fistula or has simply been aspirated through the normal opening into the larynx. Inspection through an esophagoscope may provide a more certain method of diagnosis.

The complete intestinal obstructions in newborns are usually recognized with ease in the presence of frequent vomiting, rapidly developing dehydration and failure to pass normal stools. Definite distention is often not seen, particularly if the obstruction is high. It is frequently not possible to recognize with certainty which of the many possible lesions is present, nor is it ordinarily necessary to do so. It has seemed that the temptation to prolong the study of the patient in the hope of arriving at a precise diagnosis has sometimes been too great. If ordinary clinical examination and perhaps a scout film of the abdomen indicates the need for operation, it should be postponed only long enough to provide the necessary hydration and other usual pre-operative measures.

Diaphragmatic hernia is an occasional cause of severe difficulty which may begin as early as the newborn period. At this age, symptoms related to compression of the lungs and shift of the mediastinum are much more commonly encountered than those related to the partial obstruction of the gastrointestinal tract which may arise in older patients. Such young patients may have continuous or more often intermittent difficulty in breathing. The respirations tend to be rapid and shallow and cyanosis may be severe. With the labored breathing, there is no stridor or other evidence of obstruction of the upper respiratory tract. The classical signs of altered percussion note and diminished breath sounds and perhaps the presence of bowel sounds over the involved side may be present, along with shift of the heart and trachea to the opposite side of the chest. However, it seems worth emphasizing that these signs may be difficult to detect and not infrequently are missed altogether. A chest x-ray with or without the administration of iodized oil by mouth may be necessary to establish the diagnosis. Such a chest film also serves to differentiate this lesion from a tension pneumothorax or an expanding lung cyst which may produce almost identical symptoms and which also present a severe threat to the patient's life which may be greatly lessened by early recognition and proper treatment.

Since infants with diaphragmatic hernia are subject to attacks of severe dyspnea related to distention of the displaced stomach and intestine, they should be regarded as true surgical emergencies. This haste in operation should not however, be carried to the point of transporting them to a hospital in a plane as the lessened air pressure may result in expansion of the hollow viscera to the point of suffocation.

In the case of any major surgical procedure, certain of the physiological peculiarities of newborns should be considered in pre-operative preparation. The generally low renal function of the normal young baby makes it necessary to be particularly careful not to give more sodium chloride than is needed. The tendency to develop acidosis needs to be watched. Glucose is helpful in correcting the effects of starvation and in improving the rather poor liver function. The low prothrombin level is helped by the administration of Vitamin K and by either whole blood or plasma depending on the hematocrit or hemoglobin level. It seems wise to administer some parenteral Vitamin C because of its known effect on wound healing. The danger of precipitation of the sulfa drugs in the kidney is such that they should probably be avoided, unless very specifically indicated.

The management of erythroblastosis continues to present certain practical problems. Facilities for the study of the nature of the incompatibility, beyond ascertaining whether the parents and child are Rh positive or negative, are not available to most of us. There is usually the necessity for good clinical judgment in estimating the need for transfusion. Despite the reports of good results with replacement transfusion, we have reserved this procedure for infants in whom it is clearly indicated and have not used it routinely. The technical difficulties are considerable and particularly in situations where the need does not arise frequently, the results with simple transfusion as indicated by anemia may be quite comparable. We have been impressed with the necessity for close observation of these infants for a considerable time since we have repeatedly encountered rather severe anemia developing after the baby is several weeks old.

In the case of the majority of infants where there is no difficulty in the establishment of respiration and there is every indication that the baby is normal, there are ordinarily no immediate pressing problems, but rather a concern about the establishment of adequate feeding, the prevention of infections and the education of the mother in the proper care of her baby. The superiority of breast feeding over artificial feeding has been an accepted belief for so long that it almost amounts to a dogma. The advantages in sterility and digestability have been so frequently pointed out as to require no repetition here. In recent years, there has been increasing emphasis upon the psychological advantage of breast feeding in promoting a good relationship between the mother and infant and no doubt the extra handling and loving and cuddling that the baby gets is a good thing. It has been repeatedly demonstrated that when a serious and intelligent effort is made to encourage mothers to nurse their babies that an increased percentage of them are able to do so. The usual procedure is to point out to the prospective mother the advantages of nursing long before the baby is born and in answering as well as possible any objections she may have. In addition, during the first few days, she needs instruction and encouragement in the technic of nursing. It is very frequent that both mother and physician may become unduly discouraged during the first few days over the apparent lack of success when a little more persistence may lead to success. It certainly is important to avoid giving much in the way of complimentary food during the period when the attempt is being made to establish breast feeding. If the baby is not hungry when he goes to the breast he is not likely to nurse vigorously enough to help establish an adequate flow of milk. It certainly is important that everything possible be done to promote emotional tranquility in the mother during the early period. A worried woman doesn't secrete much milk. Sometimes it even seems that undue concern over her ability to nurse the infant actually has an adverse effect on her success in doing so. If she can be assured that even though the weight gain is not optimal that the baby is nevertheless in good condition, some of the tension may be relieved with consequent improvement in milk secretion. The traditional belief in the superiority of breast feeding is so firmly fixed in the minds of both physicians and patients that it seems that we should make a sincere and sufficiently prolonged effort to promote it, even though we all realize that such efforts will sometimes be unsuccessful. If a mother can feel that she has been given a real chance to nurse her infant, she is much less likely to have a feeling of guilt and inadequacy because of her failure than if the attempt has been perfunctory and of short duration.

No matter how convinced we may be of the superiority of breast feeding, we are forced to accept the fact that a high percentage of mothers are unable to carry it out for any great length of time. Even though we believe that breast feeding is better from both a nutritional and psychological point of view, we must accept the fact that something has happened to the present day American woman which makes her a poor lactating animal and that as a consequence most babies will be fed on some modification of cows' milk. Although it may be regarded as a heresy to say so, it seems that if we examine honestly the evidence for the superiority of breast feeding, we find it rather unconvincing. In the present state of knowledge of infant nutrition and feeding, we know that the survival of those artificially fed is as good as those breast fed. Cows' milk with its higher content of nitrogen and calcium and phosphorus results in greater retention of those elements and in greater growth both in length and weight. It may not be certain that such increases are advantageous but certainly there is no evidence that they are detrimental. The inadequacy of cows' milk in certain vitamins and in iron is well known and is regularly taken care of by the supplementary administration of these food substances. The bacteriological safety is taken care of by the use of milk which has been heat sterilized. Even the psychological advantages of feeding at the breast can be approximated by giving the infant the same amount of handling and "mothering" when he is fed from a bottle instead of at the breast. To argue that because breast milk is nature's food it is certain to be better is to ignore the evidence we have of other species being unable to adapt themselves to changing conditions in their environment with a consequent decrease in survival rate. It seems that the human race has encountered some environmental change which diminishes its lactating ability and we are forced to use a substitute which fortunately seems to be adequate and in some respects even superior. These points are mentioned, not with the idea of discouraging breast feeding in any way, but to indicate that since it is obvious that artificial feeding is going to be necessary with a great many babies, we have the obligation to apply properly the present knowledge of infant feeding with cows' milk modifications. This knowledge has now reached the point where its application is extremely simple and we can undertake the artificial feeding of infants with an expectation of success quite comparable to that with breast feeding.

During the past few years, there has been much discussion of the "rooming in" plan for mothers and babies while in the hospital. It is an attempt to get away from some of the disadvantages inherent in the traditional arrangement of a nursery where all the babies are kept and cared for by nurses and taken to the mothers at certain regular intervals, usually every four hours, for nursing. In many hospitals, babies on formula feeding are rarely if ever taken to the mother. The disadvantage of this Spartan regime so far as the infants' feeding is concerned is apparent with some babies, particularly the smaller ones, where hunger does not always coincide with the prescribed feeding hours. An even greater objection is that the mother does not have an opportunity to learn about her baby and is apt to leave the hospital not knowing very much about feeding or caring for the infant. Particularly with the inexperienced mother, many questions need answering which only suggest themselves as she cares for the baby. Often such problems seem so simple to the physician that he fails to anticipate them or he simply doesn't take the time to go into all the details. Thus left to her own devices, the mother sometimes comes to wrong conclusions with somewhat harmful results or at the least is so uncertain and ill at ease with the baby that her disturbed emotional condition of itself interferes with optimal care for the infant. If the baby is in the room with the mother while she is in the hospital, she unquestionably has the opportunity for gaining experience and confidence while professional help from nurses and doctors is quickly and easily available.

Where such a plan has been used, it has evidently worked very well. Many mothers have been enthusiastic about the plan. It has been found that although it involves a considerable re-arrangement of the nurses' time that the total nursing hours per patient have not been increased. It usually involves considerable reduction in visitors to the mother in order to reduce chances of exposure of the baby to any infections and such reduction in social visits has other obvious advantages. In institutions where the plan is carried out completely, so that the baby remains in the mother's room at all times, it also has the advantage of reducing materially the opportunities for cross infection from one infant to another in the nursery. We have seen a gradual increase in the percentage of women who are delivered in hospitals until now almost all of them are. The obstetrical advantages and public acceptance of hospital delivery are so pronounced that it seems evident that most babies will continue to be delivered there. The one great disadvantage of this has been the increase in infectious diarrhea of the newborn which has now come to be a health problem of considerable magnitude. The etiology of this diarrhea is not known, treatment is unsatisfactory and it is infectious for other babies to the point that it can not be controlled, once it has started in a nursery, by any known isolation procedure. It is ordinarily necessary to close such an infected nursery to new admissions until all the infants in the nursery have been discharged and no potential source of infection is present to involve new babies. Entirely aside from the appreciable mortality of the condition, the inconvenience and financial loss involved in closing an obstetrical nursery is important. If babies are at all times kept in single rooms with the mothers or in small units of two or four beds, the opportunities for cross infection with diarrhea are evidently greatly reduced.

Certain mothers, particularly those with older children, do not wish to be burdened with the care of a new infant while in the hospital. Many of them look forward to the post-partum period as a time for rest and freedom from responsibility. Unless the idea is enthusiastically accepted by the mothers, it is not likely to succeed. In order to work, it must furthermore be accepted willingly by the nurses concerned. In many hospitals, a very considerable architectural alteration would be necessary before such a plan could be put into operation. Certain features of the plan have enough appeal that at least to some extent they can be utilized in future plans for hospital care of newborns even though it is impractical in many cases to abandon suddenly the traditional methods of caring for infants.

We are also hearing a great deal of "demand feeding" which is based on the idea that babies should be fed whenever they show signs of hunger rather than on an arbitrary pre-determined time schedule. Such a plan was certainly the usual one in the days of our grandmothers although it probably was not thought of as a formal "plan." This was followed by the rigid schedule in which babies were to be fed by the clock, awakened for feedings if necessary when the stipulated time arrived and ordinarily not indulged by being fed ahead of time even though they clearly indicated that they were hungry. It was certainly true that at about the time this routine came into wide use there was a marked improvement in infant nutrition but it means little since it was at about the same time that the basic principles of modern infant feeding as we know them, including the use of heat sterilized rather than raw milk, came into widespread use. Those of us who were taught the advantages of a regular feeding schedule soon observed that certain babies were consistently hungry after 3 hours instead of the usual 4 and were entirely willing to change the schedule. There were also some babies who were perfectly content on a 4 hour interval most of the time but who occasionally wished to be fed earlier or later than the prescribed time. Such departures from the usual time of feeding were permitted and in the main seemed not to disrupt the convenient regularity of the feeding schedule at other times.

It has been observed that infants who are fed from the beginning when they demand it usually arrive rather soon at a fairly regular time interval of three to four hours, which tends to lengthen slightly as they grow older. It seems that as a rule the end result in the time interval between feedings is about the same whether the baby or the mother determines the time of feeding during the process. It seems that "demand feeding" is not actually such a major departure from a regular but somewhat flexible schedule as it has been pictured. Most mothers have other household tasks in addition to feeding the baby and if a baby is so completely irregular in his feeding times that she is unable to plan her other activities, the psychological damage to her would seem to be of some importance. It probably is not even good for the baby for the mother to have the feeling of being a helpless slave to him since it may lead to unexpressed resentment on her part. Many mothers are afraid to make decisions about their babies and are much happier and more secure and confident, and therefore better mothers, if they can follow a prescribed routine rather than being forced to decide about each individual situation when it arises. We have heard so much about the development of a sense of security and the avoidance of frustrations in babies that we might easily go too far in catering immediately to any expressed desire. Sooner or later they must learn that there are some things they can't get by yelling for them and perhaps starting that lesson early in infancy may not be as psychologically traumatizing as it has been pictured.

The Organization and Function of the Tumor Clinic*

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To anyone interested in the treatment of cancer it is apparent that the status of the cancer patient is undergoing considerable change. A few years ago, regardless of the type, grade or location of the cancer, the diagnosis of cancer implied that here was the end. This viewpoint is no longer held in the more advanced medical centers and is undergoing considerable change elsewhere within the profession and among the well-informed laity.

Another matter which has recently changed relates to the treatment which the present day cancer patient receives. Until recently the authorities were specific in their claims that cancer could only be treated effectively by x-rays, radium and surgery. Today, this attitude, too, must be modified, as we are beginning to recognize the value of antibiotics and the hormones, as well as other agents which though less specific than x-ray, radium or surgery are, nevertheless, strongly indicated for the patient's general condition. Radiation and surgery are as important as ever to be sure, but they are now assisted by many other measures which bring the family doctor more clearly into the picture.

There has also been a change of opinion regarding etiologic factors. Only a short time ago our national speakers on cancer stated emphatically that heredity, trauma, diet and other related factors had nothing to do with cancer. This is all being changed rapidly and today, with these changes which have sound scientific and clinical background, the general practitioner is beginning to realize that broader approaches both to diagnosis and to treatment now exist. The day is past when a patient is treated only for the visible cancer. We have learned that this failure of the tissues to rebuild destroyed or worn-out cells with fresh normal cells, which should follow normal biologic processes, is often due to remote causes which can be influenced by proper treatment. The day is also gone when one type of treatment for cancer was considered as good as another and the intelligent layman knows this. Much is being written on the subject for lay consumption and much of this writing contains important truths. The doctor should always be better informed on a question of such wide interest as cancer than his lay neighbor, who is well aware of the value of thorough examination and early diagnosis.

These changes in diagnostic and therapeutic procedures seem to have been foretold by the College of Surgeons, which through its Committee on the Treatment of Malignant Diseases, many years ago set down the requirements for the formation of tumor clinics in hospitals and other institutions in this country. Through its inspectors the College has maintained supervision over tumor clinics organized in general hospitals. To have a tumor clinic in a hospital certain standard minimum requirements must be met. You are all familiar with these requirements but for the sake of correlation I shall repeat them here briefly.

1. Organization. There shall be a definite organization of the service, and shall include an executive officer and representatives of all the departments in the hospital which are concerned in the diagnosis and treatment of cancer. The services of a secretary and a social-service worker shall be available.

2. Conferences. As an essential feature of the service there shall be regular conferences or consultations at which the diagnosis and treatment of the individual cases are discussed by all members of the clinic who are concerned with the case.

3. Patients. Reference to the cancer clinic of all patients in whom the diagnosis or treatment of cancer is to be considered shall be either voluntary or obligatory in accordance with the vote of the medical staff or of the governing board of the hospital.

4. Equipment. In addition to the diagnostic and therapeutic surgical equipment which is required in every approved general hospital there shall be available an apparatus for x-ray therapy of an effectiveness which is generally agreed upon as adequate, and an amount of radium sufficient to insure effective treatment.

5. Records. In addition to the records which are required in every approved general hospital, there shall be additional records of (a) the details of the history and of the examination for cancer in different regions of the body, such as are indicated on the form records which are recommended by American College of Surgeons; (b) the details of the treatment by radium or x-ray as indicated on the form records which are recommended by the Committee on the Treatment of Malignant Disease, American College of Surgeons; (c) periodic examinations at intervals for a period of at least five years following treatment.

6. Treatment. The treatment of cancer patients shall be entrusted to the members of the staff of

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*Read before the Annual Sessions of the Nebraska State Medical Association in Lincoln, May, 1950.

the cancer clinic except in cases in which adequate treatment in accordance with the collective recommendations of the staff of the cancer clinic can be procured otherwise.

RURAL TUMOR CLINICS

Obviously the organization of a tumor conference in rural areas, where radium, deep x-ray apparatus, trained pathologists and radiologists are not to be found, cannot follow too closely the College of Surgeons hospital requirements. However, the problem of cancer and the cancer patient are still present in these areas and in order to give the cancer patient the greatest possible service we have modified the hospital requirements. At the present time we consider as practical the following essentials for the operation of these rural cancer clinics or cancer conferences.

1. Organization—chairman, vice chairman and secretary.
2. Regular conferences on specific dates.
3. Patients—only patients presented by their family doctor are considered.
4. No specific equipment is needed other than found in an office or hospital.
5. Records of the proceedings should be made and filed in the tumor clinic.
6. Treatment—as determined finally by the family physician.
7. Charges—no charges are made for the consultations or physical examination. If able to pay, a charge is made by the hospital for any specific examinations such as laboratory and x-ray, which may be required.

The organization of these tumor conferences or clinics throughout the state is a definite step toward blocking the intrusion of the socialized medical group into the cancer field in our state. Cancer is one disease in which there is great public appeal and unless we are prepared to give special attention to the cancers or suspected cancers in our locality, we will find socialized medical workers moving in with an over-sized mobile doctor's office, equipped with an x-ray machine and a few test tubes, to examine every one of your patients for cancer. This is what has happened in tuberculosis quite generally throughout the country and in a few areas the cancer truck has made its appearance. The real antidote for this poison is regular conferences which you attend in your locality with or even without your patient. Some patients feel much better if they are present at the clinic. They learn the results of the examination later from their own family doctor. Where it is not practical to present the patient, the problem of the particular patient with the clinical record, up to date, may be presented for a brief discussion. These clinics act as a source of education for the doctors and a means of service to the patient.

The progress in formation of cancer clinics throughout the state has been slow but the results are gratifying. Regular cancer clinics are held at Norfolk, Lexington, North Platte, Beatrice, Nebraska City, Wahoo, Fremont, McCook, Alliance, Scottsbluff and Hastings. As time goes on other areas will undoubtedly express a desire to organize groups of men who are not near any of the existing groups. The more groups are organized and hold regular meetings, the better medical service will be available to our cancer patients and the more our doctors will know about cancer. In addition to the doctors of the area, provision is made by the Cancer Research and Educational Society to supply two consultants for every conference. These consultants are doctors selected by the members of the conference. They may be selected to attend all conferences or they may change consultants with every conference. The local doctors are in complete charge of their conferences. This in turn makes it evident that they are not obliged to have any consultants if they so desire. In other words, the tumor clinics are on a thoroughly democratic basis, in the sense of the usage of the term "democratic" some years back, meaning, home rule.

ORGANIZATIONS COOPERATING IN COMBATING CANCER

The above discussion has been concerned with the management of the cancer problem at the local level. A few words on the various organizations cooperating in combating cancer at the state and national level would be in order.

The principal organizations are the American Medical Association and its component units; the American Cancer Society and its Divisions; the State Health Department; the National Cancer Institute and various other organizations such as the Damon Runyan Cancer Fund. There are other organizations some of which I am afraid are of questionable integrity.

The relative position of these different organizations is somewhat as follows: Under the American Medical Association we have the Nebraska State Medical Association; the members of which form the Nebraska Cancer Research and Educational Society. This group interests itself mainly with the operation of the tumor clinics which are sponsored by the various county and district medical societies. The main source of funds for the Nebraska Cancer Research and Educational Society is from contributions made by the Nebraska Division of the American Cancer Society. This latter group retains 60% of the funds annually collected during the cancer drive, sending 40% of the total to the National Headquarters of the American Cancer Society in New York. Our two medical schools in this state have for the past few years been given grants for research work and this fund also pays the expenses of the all-year organization of the Cancer Society with offices in Omaha. These funds are also spent in supervising lectures on cancer to lay organizations. Dr. Harold Eggers, former Professor of Pathology at Nebraska University, is in charge of this activity. It is easy to see how the Nebraska Division of the American Cancer Society and the Nebraska Cancer Research and Educational Society cooperate to the fullest extent, the former in the education of the laymen with the aid of physicians in the locality and the Cancer Research and Educational Society in education of the physician.

The State Health Department also contributes to the educational effort, both lay and professional. It maintains some social service workers, collects statistical data and undoubtedly as years go by will have a much greater fund of information available to the profession of this state on the cancer problem than it now has.

The National Cancer Institute, financed by the Treasury Department of the United States, contributes funds to our State Health Department, to our medical schools, as well as carrying on extensive research activities at Bethesda, Maryland.

This year the Damon Runyan fund is probably the outstanding of the miscellaneous organizations throughout the country seeking money for cancer. Whether this and other similar drives are necessary or wise in their conflicting and duplicating drives for public contributions is in my opinion open to doubt.

So many drives are put before the public each year that one is inclined to agree with those who wish to have but one drive to cover all the beggars. This certainly should be done if only the financial portion of the cancer drive were to be considered but the greatest good in the cancer drive comes from having a definite period of the year set aside as cancer month, during which time many facts concerning early cancer are rapidly placed before the public. To combine the cancer drive with other drives would result in the loss of the educational value of the cancer drive and this is by far the most important feature of all the activities of the work of the American Cancer Society.

Cancer is a big problem and undoubtedly much has been left unsaid but the data presented here will give one a superficial view of the cancer situation as it applies to the medical profession at this time, with special reference to our organization in Nebraska. The profession in Nebraska is aware of the fact that cancer is to a great extent a degenerative disease, therefore, we will have it with us for all time and we are prepared to meet the situation with our tumor clinics and other conferences on neoplastic disease.

* * *

CARE REPORTS $1,000,000 CONTRIBUTIONS FOR BOOKS

The CARE-UNESCO Book Fund September 26, celebrated its first anniversary by announcing it had received nearly a million dollars in contributions and pledges to provide new books and scientific equipment for educational institutions overseas.

Paul Comly French, Executive Director of the Co-operative for American Remittances to Europe and Asia, made the announcement at a meeting in New York. Clifton Fadiman and Cornelia Otis Skinner, speakers at the meeting, urged the public to help share American technical knowledge with under-developed and war-depleted countries through continued support of the CARE-UNESCO program. Guests at the meeting included publishers, authors, educators and representatives of organizations which have participated in the plan.

The report showed that 378 educational institutions in 24 countries have benefitted by deliveries of text and reference works purchased with contributions of various amounts sent to the Book Fund at CARE headquarters, 20 Broad St., New York City, and local CARE offices throughout the United States, Canada and South America.

Indications for Choledochostomy

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An evaluation of the patient's history and the changes present in the extrahepatic biliary system at operation constitute the basis upon which the need for choledochostomy is determined. However such an evaluation cannot always be made with ease. The clinical history, although indispensable, may not in itself dictate or obviate the need of choledochostomy. Radiological examination gives an impression but certainly an incomplete evaluation of the functional status of the system. Laboratory studies of liver function and of blood and urine add to the information obtainable. However, all information whether of clinical, radiological or laboratory sources must be evaluated at the time of operation, and here the decision for or against choledochostomy can no longer be postponed. This paper presents the reasons for which seventy-one common ducts were explored in a series of 230 conservative biliary procedures with an analysis of the results in terms of calculi found.

The type of gallbladder pathology encountered in this series of cases is tabulated in Fig. I. Gallstones were present in the gallbladder in 86.4 per cent of the cases coming to surgery for their initial biliary procedure. Although this is a relatively small series, it has significance inasmuch as the surgical procedures were all conducted by the senior author, making for uniformity in observation and control of the details presented.

FIG. I
BILIARY PATHOLOGY IN CONSECUTIVE SERIES OF 230 CASES COMING TO SURGERY

Pathology	Procedure	Cases
Acute Cholecystitis	Cholecystectomy	10
	Cholecystostomy	11
	Sleeve Resection	5
Chronic Calculous Cholecystits	Cholecystectomy	156
	Cholecystostomy	1
	Sleeve Resection	1
Non-Calculous Cholecystitis	Cholecystectomy	28
	Cholecystostomy	1
Cholesterosis	Cholecystectomy	9
Varied	Secondary Choledochostomy	8
		230

The incidence in which choledochostomy has been performed and the results obtained have varied through the last decades. A few representative reports are summarized in Fig. II. In general, when the incidence of choledochostomy was high the percentage with which stones were found became less. This would suggest that there is merit in utilizing strict criteria in determining the need for choledochostomy.

FIG. II
REPORTED INCIDENCE OF CHOLEDOCHOSTOMY WITH STONES IN THE COMMON DUCT

Author	Total Cases	Ducts Opened	% Ducts Opened	% Stones Found
Lahey				
1910-1926			15.5	8.4
Cattell				
1930-1933	493	198	40.2	20
1934-1937	634	284	44.8	16
1938-1941	909	444	48.8	14
Glenn				
1932-1938	907	112	12.3	55
Adams				
1942-1945	1104	504	45.7	16.8
Walters				
1946-1947	1259	301	24	50
McKittrick & Wilson				
1949	100	100	100	52
McLaughlin & Kleager				
1950	230	71	30.7	33.8

In this series choledochostomy was done in seventy-one cases, or 30.7 per cent of the 230 cases subjected to biliary surgery. As shown in Fig. III, stones were found in the common duct in 24 cases, or 33.8 per cent of the ducts explored. It is interesting to note that with an increase in the incidence of choledochostomy from 18 per cent in the first hundred cases to 44 per cent in the second hundred cases, the percentage of stones found increased only 3 per cent between the two groups, or for practical purposes remained essentially the same.

FIG. III
CHOLEDOCHOSTOMY IN CONSECUTIVE SERIES OF 230 BILIARY PROCEDURES

Cases	Ducts Opened	% Opened	Stones Found	% Stones Found
1-100	18	18	6	33.3
101-200	44	44	16	36.3
201-230	9	30	2	22.2
Total (230)	71	30.7	24	33.8

Immediate cholangiography as advocated by Mirizzi(7) or the use of fluorescein(8) was not attempted in this series. The decision to open the common duct was made only after visualization of the cystic and common ducts had been accomplished. Each operative record was reviewed and the findings for which each duct was opened were tabulated. Seven distinct reasons as listed in Fig. IV became apparent, and for purposes of discussion are called the "primary" indications for choledochostomy in this series. The additional or "secondary" reasons for choledochostomy were also tabulated with the respective "primary" indications in Fig. V.

PALPABLE STONE ONLY

It is interesting to note that while common duct stones were found in 24 cases, in only three was the duct opened by reason of palpable stones alone. In general the presence or absence of calculi within the common duct can rarely be determined by palpation of this structure. The obesity of many of these patients and inflammatory reaction in the area and about the distal end of the duct are the chief adverse factors. On numerous occasions stones have been found when calculi could not be palpated and the duct was opened by reason of dilatation. Certainly in this experience palpation of the ducts, although of academic interest, has been disregarded as a significant indication or contraindication for choledochostomy.

FIG. IV
PRIMARY INDICATIONS FOR CHOLEDOCHOSTOMY
SERIES OF 71 PATIENTS

Primary Indications	Cases	%	Stones Found
Palpable Stone Only	3	4.2	3
Dilated Common Duct	39	56.3	10
Small Stones in Gallbladder	12	16.9	3
Jaundice	7	9.8	3
Thickened Ducts	1	1.4	0
Aid to Dissection	1	1.4	0
Secondary Procedure	8	11.2	5
Total	71		24

DILATATION OF THE DUCTS

Dilatation of the common duct was the "primary" indication for opening the duct in 39, or 54.9 per cent, of the cases in this series (Fig. V). Stones were found in 10 of these cases, nine of which had a definite clinical history of jaundice. In sixteen cases of this group of 39 only the common duct was dilated, and stones were found in but one instance. In twenty of these cases, a dilated cystic duct was also present, and seven of the ten cases with stones occurred in this group. In the three remaining cases multiple small stones were present in the gallbladder in addition to a dilated common and a dilated cystic duct, calculi being found in the common duct in two of these three patients.

In general the combination of dilated common duct and dilated cystic duct served as the best indication for choledochostomy and provided the greatest yield of common duct calculi. It is interesting to note, however, that approximately 50 per cent of this group were free of jaundice (Fig. V).

SMALL STONES IN THE GALLBLADDER (DUCTS NOT DILATED)

This occurred as the "primary" indication for choledochostomy in 12, or 16.9 per cent, of the cases in this series. Colic in this group was not a significant "secondary" indication. It had been present in only four cases, and none of these yielded calculi. However, in combination with a dilated cystic duct (irrespective of colic or jaundice) calculi were found 3:2. This is as would be expected. In general, small stones in the gallbladder were a significant finding in this series, and in combination with a dilated cystic certainly dictates that a choledochostomy be done irrespective of jaundice or colic.

FIG. V
PRIMARY AND SECONDARY INDICATIONS
FOR CHOLEDOCHOSTOMY

		Jaundice		No Jaundice	
	Cases	With Stones	Without Stones	With Stones	Without Stones
Palpable Stone Only	3	1	0	2	0
Dilated Common Duct:					
C.D. Only	16	1	6	0	9
With Dilated Cystic Duct	20	6	5	1	8
Dil. C.D., Cystic D. and Small GB Stones	3	2	0	0	1
	39	9	11	1	18
Small Stones in Gallbladder (C.D. Not Dil):					
With Colic	4	0	2	0	2
Without Colic	3	0	0	0	3
With Colic—With Dil. Cystic	5	0	1	3	1
	12	0	3	3	6
Jaundice:					
Jaundice Only	2	1	1	0	0
With Colic	3	1	2	0	0
With Dilated Cystic	2	1	1	0	0
	7	3	4	0	0
Secondary Procedure	8	5	1	0	2
Miscellaneous:					
Thickened Ducts Only	1	0	0	0	1
Aid to Dissection	1	0	1	0	0
	2	0	1	0	1
Total	71	18	20	6	27

JAUNDICE

Jaundice as a "primary" indication for choledochostomy in the absence of palpable stones, a dilated common duct, or small stones in the gallbladder was present in only seven, or 9.8 per cent of this series. There was a history of colic in three cases and a dilated cystic duct was present in two. Stones were present in three of these seven cases and absent in four cases.

FIG. VI
JAUNDICE AND COMMON DUCT STONES

Clinical Jaundice or Definite History			38 Cases
Stones Not Found	20	(53%)	
Stones Found	18	(47%)	
Negative History or Clinical Jaundice			33 Cases
Stones Not Found	27	(82%)	
Stones Found	6	(18%)	

In the over-all series, however, jaundice occurred in approximately 50 per cent of the cases (Fig. VI). Thirty-eight cases had a history of having had jaundice or had clinically evident tissue jaundice at the time of surgery while thirty-three cases had neither. As indicated in Fig. III, calculi were found in 33.8 per cent of the total series of 71 common duct explorations. The presence of stones in the common duct was confirmed in approximately 50 per cent of the cases with a definite past history or evident clinical jaundice and in only 18 per cent of those without jaundice. In this respect, jaundice was a significant indication for choledochostomy. Choledochostomy carried out as a "secondary" procedure and for miscellaneous reasons (Fig. V) will not be further discussed in this report.

EVALUATION OF THE HAZARD OF CHOLEDOCHOSTOMY

In this series the hospital course of patients subjected to an additional choledochostomy compared very favorably with those in which surgery was limited to the gallbladder. The average hospital stay for the former group was 13.7 days and 11 days for the latter. Choledochostomy in itself added only 2.75 days to the period of hospitalization.

Routine cholangiograms were made on all patients with choledochostomy on the 7th postoperative day. The T-tubes used for common duct drainage were removed on an average of the 12th postoperative day, the shortest period of drainage being the seven days and the longest fifty-two days.

Biliary drainage following removal of the T-tube offered no real problem and continued in varying amounts for an average of 4.7 days. The shortest period of drainage was one day and the longest twenty days.

The combined incidence of complications including wound infections, serum or bile collections, dehiscence, herniae, atelectasis, phlebitis, and paralytic ileus was 15.2 per cent in the group subjected to choledochostomy and 11.5 per cent for the group without common duct exploration. In this series choledochostomy thus added 3 per cent to the combined over-all incidence of complications. Stricture of the common duct did not occur as a complication in this series.

The single death yielding an over-all mortality of .43 per cent in this series of 230 consecutive cases occurred in a patient not subjected to choledochostomy. This patient succumbed with bile peritonitis on the second postoperative day following secondary cholecystectomy for a mucous fistula.

CONCLUSIONS

1. A series of 230 consecutive biliary procedures is reported in which an associated choledochostomy was performed in 71 instances.

2. Stones were present in the comon duct in 33.8 per cent of patients subjected to choledochostomy.

3. This incidence with stones was rather constant and varied little with the changing frequency of common duct exploration.

4. The clinical and anatomical findings which have been most reliable in suggesting the necessity of exploring the common duct have been discussed.

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EXPERIMENT SUGGESTS COCKROACH AS POSSIBLE SPREADER OF POLIO

Cockroaches under certain conditions may possibly be carriers of the polio-encephalomylitis group of viruses, an editorial in the December 2 Journal of the American Medical Association pointed out.

Those viruses are responsible for the inflammation of the gray matter of the spine and brain, one result of which is paralysis and frequently deformity.

The editorial cited experiments carried out in the departments of bacteriology at the University of Minnesota, Minneapolis, and the University of North Dakota, Grand Forks.

There, adult cockroaches were strapped to corks with adhesive tape. Each was given a single feeding of a suspension containing the brain tissue from a mouse dying from encephalomyelitis. The excrement of the cockroaches was made into a solution which was injected into normal white mice. Injections of material from normal cockroaches were given another group of mice.

"For each of the first six consecutive days after the experimental feeding the fecal suspensions contained sufficient virus to paralyze and kill mice in two to four days," the Journal said. "On and after the seventh day, results of the tests were negative. All control mice remained normal.

"Because of the gregariousness, longevity and nocturnal habits of cockroaches, and the intimacy and constancy of their association with the food and excreta of man and animals, this experimental evidence is of suggestive clinical interest."

The Einhorn String Test in the Diagnosis, Localization and Progress of Upper Gastrointestinal Bleeding*

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The string test was first described in 1909 by Max Einhorn as a diagnostic procedure to be used in upper gastro-intestinal bleeding. It consisted simply of having the patient swallow a weighted length of white silk string, leaving it down over night, recovering and examining the string for presence and position of blood stains.

With the advent and widespread use of contrast X-rays to demonstrate gastro-intestinal pathology, the string test was omitted from general use, although Dr. Einhorn continued to write about it in 1923 and again in 1939.

Recently, interest in this test has been revived and a few more articles and editorials have appeared in the literature.

The purpose of this paper is to review the technique and to present some of our experiences with the test and its clinical applications.

PROCEDURE

A 36 inch length of white string is attached to a shot or duodenal bucket. We have found ordinary cotton string a satisfactory substitute for the silk string originally described.

A knot is tied 22 inches from the bucket and another at 32 inches.

Nothing but white food and medicine is taken the evening the test is performed.

Two hours after the evening meal, the patient swallows the string until the first knot is at the teeth. One hour later, with a glass of milk, the string is swallowed to the second knot and secured to the face with tape.

Before breakfast the following morning the string is removed and dried.

If undue tugging is necessary to dislodge the string it may be expedient to have the patient swallow the whole string and recover it in the stool. We have yet to find this necessary.

The string is then examined for evidence of blood and bile. The length of stain and distance from the teeth is measured and recorded.

To illustrate the use of the string I would like to present the following three cases.

Case 1, Mr. H. M., a 63 year old man admitted to the service of Drs. Bucholz and MacQuiddy. He complained of being weak and dizzy and passing black tarry stools for one week following treatment for upper respiratory infection with aureomycin. No history of digestive disturbances could be obtained. Physical examination revealed a pale, somewhat dyspneic man with a pulse of 120 and blood pressure of 150/70. Except for an aortic systolic murmur and black stool on the rectal glove, the examination was negative. His hemoglobin was 6 Gm. and R.B.C.2,65. Gastric analysis showed no free fasting acid but a response to alcohol test up to 34°. Serum protein and prothrombin time were normal and EKG showed right bundle branch block.

He was transfused up to 13.5 gm. hemoglobin and showed no further evidence of massive bleeding. Barium enema was negative. An upper G.I. examination four days after admission showed a high transverse stomach with hypertonic pylorus. A barium pocket at the constricted pylorus was suggestive of a duodenal ulcer. Two days later a string test was done which showed a one inch blood stain 19½ inches from the teeth and bile stain starting 23 inches from the teeth. This was interpreted as suggesting prepyloric bleeding. He was explored four days later by Drs. Best and Potter.

Upon opening both stomach and duodenum, no ulcer or bleeding point could be found. He was closed and made an uneventful recovery.

Case II, Mrs. C.S., a 48 year old woman admitted to the service of Dr. Bonniwell. She had been well until the morning of admission when she became nauseated and vomited several mouthfulls of red blood. There had been no previous similar episodes, and no history relative to the upper G.I. tract or liver could be obtained. Physical examination was negative. Blood pressure and pulse were normal. The hemoglobin was 9.5 Gm. with a R.B.C. of 3,15. She received 500 cc. of blood and hemoglobin rose to 11 Gm. A string test the following day showed a blood stain one inch long, 15 inches from the teeth. Spotty stains of bile began 16 inches from the teeth and became solid about 22 inches from the teeth. This was thought to be due to bleeding near the cardia and regurgitation of bile into the stomach. She did well on a Sippy diet and five days later an upper G.I. examination showed a large hiatus hernia with thick junctional mucosa. This was corrected surgically several weeks later.

Case III, Mr. A.H., a 59-year-old machinist admitted to the service of Drs. MacQuiddy and Bucholz. For the past two years he had repeated episodes of burning epigastric pain, often relieved by antacids. In the fall of '49, during one of these periods, he had an upper G.I. examination which was negative. A rather sudden return of symptoms brought him into the hospital on this admission. Physical examination revealed nothing except tenderness and muscle guard in the epigastric region. While in the hospital the pains became worse and almost constant, being more severe three to four hours after meals. There was hematemesis once in the hospital. Laboratory studies were negative except for occult blood in the stool, a high free gastric acid and a drop in hemoglobin from 14 gm. to 11.5 gm. Gall bladder X-rays were normal. An upper G.I. examination showed a contracted stomach with thick rugal folds and the impression was: Gastro-duodenitis. A string test showed a 2½ inch blood stain 15 inches from the teeth and no bile stain. The impression was high gastric bleeding. The upper G.I. examination was repeated and was suggestive of an ulcer 2½ cm. above the pylorus. His symptoms were not relieved by medical management of milk, antacids and antispasmotics and two weeks later he was operated on by Dr. McLaughlin. A gastric ulcer five inches above the pylorus on the lesser curvature was resected.

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*Presented at the Staff Meeting of the Nebraska Methodist Hospital, June 6, 1950.

DISCUSSION

Normally the string is bleached to a point 22 to 25 inches from the teeth where the bile stain (a yellow to green stain) is noted continuing on to the bucket.

If bleeding is present, a brown or reddish brown stain may be noted anywhere along the string.

Bleeding from the teeth, mouth or nose will stain the string all the way and will obscure any bleeding points below.

Esophageal bleeding will show stains in the first 12 inches of string.

A stain 12 to 15 inches from the teeth would indicate bleeding at or near the cardia.

A stain from 14 to 22 inches from the teeth is usually indicative of gastric bleeding.

The bucket usually passes into the duodenum and the last ten inches of string shows bile stain. A blood stain in this area or within two inches above it usually indicates duodenal bleeding.

After examination of the string, testing the stains with benzidine reagent will confirm or deny the presence of blood.

The string test is a simple, easy, inexpensive aid in the diagnosis, localization and follow-up of bleeding lesions of the upper gastro-intestinal tract. It can be employed in hospital, home or office with less discomfort to the patient than the usual gastric analysis.

It could be quite useful in the follow up of ulcers whose activity can not be determined by X-ray and thus guide the intensity of treatment.

SUMMARY

A brief history of the Einhorn string test is presented and the technique reviewed.

Three cases are presented, the third illustrating disagreement between the X-ray and string was settled at surgery in favor of the string.

The interpretation of the test is discussed along with its place in clinical application.

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MEDICAL SURVEY SHOWS TREND TOWARD GENERAL PRACTICE

Student polls and medical school programs reveal a rising trend toward the general practice of medicine, Dr. Donald G. Anderson of Chicago, secretary of the American Medical Association's Council on Medical Education and Hospitals, stated recently.

Dr. Anderson cited statistics gathered for the council's recent survey of medical education, which covered the 72 medical schools in the nation approved by the A.M.A.

"Student polls taken over a period of the last three academic years indicate that the percentage of students planning to enter general practice has increased from 36 per cent to 47 per cent, and that the number planning to specialize has decreased from 36 per cent to 31 per cent," he said.

"During the academic year 1949-1950, 31 classes in 19 medical schools were polled by their schools to determine the students' plans with respect to practice.

"The over-all averages for the students in the 31 classes were as follows: 47 per cent planned to enter general practice and 31 per cent to specialize; 22 per cent were undecided.

"Forty-two schools have programs specifically designed to stimulate the interest of students in careers in general practice. Thirteen schools report the establishment of preceptorships with practicing physicians as regular assignments in the medical school course, nine having established them within the last two years.

"Fifteen schools are sponsoring in their affiliated hospitals internships specifically designed for prospective general practitioner. Twelve schools are sponsoring residencies in their affiliated hospitals for prospective general practitioners. Several other schools have similar programs under consideration."

Nearly two out of every three physicians in private practice in this country are general practitioners, according to the A.M.A.'s recent count of physicians in connection with its publication of the 18th edition of the American Medical Directory.

HEALTH SERVICES FOR NEBRASKA CHILDREN

"Study of Child Health Services in Nebraska"

Report of The American Academy of Pediatrics

Chapter V

COMMUNITY HEALTH SERVICES

There are seven principal categories of child health services included in the national planning of this study; namely well-child conferences, mental hygiene services, services for the physically handicapped, public health nursing services, school health services, communicable diseases control, and dental services.

Although these services are for the most part the concern of the general public of the individual states and the nation as a whole, yet they also become the concern of the local physicians because these services involve medical care.

The operation of these services requires the technical experience and ability of those who are trained to render professional assistance. In addition to the actual rendition of service, there is also utilization of these operations as a valuable means of health education of the child and adult population. The value of this latter function is inestimable.

WELL-CHILD CONFERENCES

See Chart No. 10.*

During the year of this study there were 365 sessions of medical well-child conferences held throughout the state. All of these conferences were held in the lesser metropolitan counties (315 conferences) and the adjacent counties (50 conferences). 315 of these were for infants and preschool children and 50 were for infants only. 122 of the total conferences were by official agencies and about twice as many were of a voluntary nature; namely 243 conferences. These were equivalent to 3.1 sessions per 1,000 children under the age of five (official agencies 1.0 and voluntary 2.1).

In the State of Nebraska the number of patients participating in the well-child conferences during one year was 2,684 (1,126 infants and 1,558 preschool children) making the total number of visits 5,193 (2,848 infants and 2,345 preschool children). This is equivalent to 22.7 patients and 44.0 visits per 1,000 child population under 5 years of age. See Chart No. 11. Visits averaged 1.9 per patient. The "isolated semi-rural" and the "isolated rural" counties had no medical well-child conferences.

Of the total 365 conferences, 172 give routine immunizations (smallpox, diphtheria and whooping cough). In the 365 sessions health officials were present at 99 of them, part-time paid pediatricians were in attendance at 174 sessions, and part-time paid general practitioners were in attendance at 142 of the sessions.

Reported as a standard service at all the sessions was public health nursing follow up, as was advice to mothers on formulae, feeding care and training. Consultant service by a nutritionist was reported by all sessions, but none of them had consultant service by psychologist or phychiatrist.

2. Mental Hygiene Service:

There is only one child guidance clinic known in the State of Nebraska, and no data was received from this institution.

3. Services for the Physically Handicapped:

The handicapped child presents a many sided problem. For our purpose this includes the medical aspect i.e. diagnostic and therapeutic, as well as the requirements of special educational facilities.

The sources of our data include the P. T. A., Bulletin on Special Education issued by the Division of Supervision and Curriculum (Leo P. Black, Director) of the State Department of Public Instruction in 1947, and prepared for the most part in the Educational Work Shop at the University of Nebraska 1946 Summer School, and the Omaha Public School System.

The extent of handicaps among Nebraska school population includes the following: Physically crippled, Malajusted, Deafness, Speech impairment, Retarded reading, Mental retardation, and Vision defects.

Of these, actual Surveys in the state have been made in extent of handicaps in (1) Hearing, (2) Speech, (3) Reading, (4) Physically Crippled. In the remaining headings estimations are made on findings of Surveys made outside of the state.

HEARING:
Losses ranging between 5 and 10% with an average of 6%
(Dr. Edward Fowler, Nebr. Med. Journal, March, 1946)

SPEECH:
Impaired—7.5%
(Omaha Schools) 5.1%
(University of Nebraska Feshmen)

READING:
Retardation—From 5% of the fourth grade to 10% of sixth grade children were two or more years retarded in reading.

PHYSICALLY CRIPPLED:
No accurate census. The State Department of Assistance Division of Services for Crippled Children has a record of 3,302 crippled children in Nebraska under 21 years of age.

The importance of physical examinations and emotional evaluation, and medical treatment cannot be stressed too greatly in school health. This is usually accomplished by referral to private physicians, Clinics in Omaha and Lincoln, and Clinics in the state under the State Department of Assistance, Division for Crippled Children.

"The facilities for psychological testing are very meager in the state, and the few available are able to handle only a small percentage of the cases."* Children are referred to clinics located in the State University and the Teachers Colleges, and to available psychiatrists. "The well trained pediatrician is qualified to help in the field of social and emotional instruction." "The present services can at best reach only a small percentage of those needing care. They fall far short of providing adequate diagnostic and advisory services for the maladjusted children of Nebraska." The Omaha and Lincoln School Systems are satisfactorly exempted.

THE DEAFENED CHILD

The deafened child may be retarded or maladjusted. The state provides special training for the deaf at the Nebraska School for the Deaf, in Omaha. Also two day schools for the deaf are maintained at Lincoln and Wilber. For most of the "partially hearing" there are no special provisions.

The pure tone audiometer has been used in occasional surveys in the state. "In a recent survey in one county, it was found that 5.9% of the 218 children tested had sufficient loss to make special seating in the class room and instruction in lip reading advisable. In 4.5% the loss was so severe as to warrant recommendation of a hearing aid. Entrance tests given to 2553 entering students (college) in 1945-1946 revealed that 5.8% had a serious hearing loss."

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*Charts and maps to appear in reprint.

Audiometer tests have been given to all students in Omaha Public Schools for the last fifteen years. On detection of impaired hearing, the child is referred to his private physician or clinic for accurate diagnosis and recommendations for treatment and training. This is important to the child when we accept that impaired hearing or deafness may be due to external ear disturbances in 4%, infection or results of infection in 45.3%, results of trauma in 12%, and congenital causes in 41.5%.

SPEECH HANDICAP

"In Omaha approximately 7.5% of all public school children are receiving speech correction training." "Only Omaha with five speech correction teachers and a supervisor, provides a speech correction program throughout the public schools." Since 1941 every new student entering the University of Nebraska has been given a speech test (5.1% defective).

"The University of Nebraska Speech Improvement Laboratory in cooperation with the Educational Psychology Department provides a limited resource for diagnosis and retraining of individuals with speech and hearing handicaps. These services include on-campus teacher training courses and childrens' clinics, and off campus clinics for diagnosis and recommendations at out-state centers, and field courses for teacher training.

The Kearney State Teachers College maintains a diagnostic program and the Wayne State Teachers College has a summer workshop in speech correction. Other colleges in the state are making plans to include speech correction in their programs. "There are other related services available: the Nebraska Crippled Children Society, The Nebraska Society for the Hard-of-Hearing, private speech correction teachers, and local health service." "The present program in Nebraska is very inadequate."

DEFECTIVE VISION

The White House Conference (1931) said that one child in five had a visual defect that warranted correction. In addition to these children there are .05% blind and .20% partially sighted.

The state provides a school for the blind at Nebraska City. For those who are less severely handicapped, "separate sight-convenience classes will not be financially justifiable in many communities in Nebraska."

The state law requires schools to give an eye examination each year, this would be given by the teacher, nurse, or others with a Snellen Eye Chart. This would afford a screening process for detection of more or less serious visual defects. In a survey of six out of a total of the state's 93 counties, the county Superintendents of Education reported, "that all schools in thirty-five counties gave eye tests, in most cases administered by the teacher. In the other twenty-six counties some schools gave tests and others did not."* Children who show any impairment of vision in these tests are referred to their family physician or clinic for complete diagnosis and treatment.

In the Omaha Public School System all the children are given yearly tests with the Snellen Chart by the school nurses. This is also beginning in the Parochial schools.

An interesting observation was made by Sam Dahl in a recent study. He, "surveyed the opinion of thirty-two school superintendents in order to learn what they thought was the most needed school health service. Helping needy children buy glasses ranked second in the list of twenty-three services. Yet of the twenty agencies included in the study, not one made provision for aid to the visually handicapped."**

RETARDED READER

This problem has received much attention in the school system in the state. Statistically it is probably safe to estimate that at least 7.5% of our public school children are "retarded readers."

This situation presents some points of meeting on common ground of educators, psychologists, medical practitioners, and parents. It is here mentioned in order to direct attention to it as a phase of school health. It may possibly contribute to the maladjustment of the retarded reader or reveal other handicaps e.g. visual defect; low mentality may contribute to its diagnosis.

OTHER HANDICAPS

There are other groups of handicapped children in addition to those just discussed.

There are (1) Orthopedic Cripples, (2) the Cardiac group, (3) the Cerebral palsy group, and (4) those with Epilepsy.

These are essentially medical problems in the way of diagnosis and therapy. But in the light of proper adjustment emotionally and socially, they require special education facilities.

Special education attention may restore some of these "cripples" to a useful, independent life. It may also transform some from an existence of utter dependance to one of relative freedom from constant personal attendance for even basic bodily activities.

The Division of Services for Crippled Children render specific health services under the heading of Child Welfare, as follows: Orthopedic Services; Polio Treatment; Cleft palate and Harelip correction; Orthodontia Care; Treatment of Rheumatic Fever; Psychiatric and Psychometric Diagnosis; Clinics for Crippled Children.

In addition, there are private and charitable resources for the care of the physically handicapped e.g. Elks Clinics, Shrine Hospitals for Crippled Children, Infantile Paralysis Foundation, Nebraska Society for Crippled Children, the Nebraska Tuberculosis Association, American Legion, Lions Clubs, and the Junior Chamber of Commerce, and others.

Resident care and educational facilities are provided at the State Orthopedic Hospital at Lincoln and the Hattie B. Munroe Home of Convalescing Children at Omaha. Several cities also furnish visiting teachers for children who are home-bound or hospital-bound because of physical disabilities.

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* A. Stroh: "Special Education for the Physically Handicapped," Uni. of Nebr., 1946.

** Samuel Philip Dahl: "A Study of Certain Public and Private Social Agencies Which Render Health Services in Nebraska," Uni. of Nebraska, 1946.

"Our present resources are well utilized but are sorely inadequate."

CLINICS FOR THE PHYSICALLY HANDICAPPED

Seventeen counties in Nebraska have clinics for the physically handicapped. Services for the hard of hearing were not included in the program.

Orthopedic clinics were held in the following counties:

- Adams
- Box Butte
- Buffalo
- Custer
- Dawson
- Douglas
    - Omaha (1)
    - Balance (1)
- Hall
- Holt
- Keith
- Lancaster
    - Lincoln (2)
- Lincoln
- Madison
- Red Willow
- Rock
- Scotts Bluff

There is no record of speech or vision clinics in Nebraska with the following exceptions: Speech handicapped children in Omaha Public Schools receive speech correction training in the program operated by the school system. There are also the limited resources of the University of Nebraska Speech Improvement Laboratory at Lincoln. (Vide supra). The only record of Rheumatic fever clinic is at Omaha in Douglas county, the largest city in the state located on the extreme eastern border of the state. Douglas county is also the chief center of Orthopedic clinics. In addition to those conducted by the Division of Crippled Children, Department of Assistance and Child Welfare, there are weekly orthopedic clinics in the dispensaries of the Creighton University and University of Nebraska Medical Schools. Orthopedic, even including limited clinical laboratory tests and x-ray examinations, follow-up attention and recommendations are given to these patients. Those who present orthopedic complaints and require more complete examinations may be referred to the State Orthopedic Hospital in Lincoln. In this hospital there are available all special consultant assistance and special examinations incuding psychometric measurements etc. Those patients requiring orthopedic treatment are also referred to this hospital. For those patients who do not present orthopedic complaints and who may require more complete examinations than are available at the clinic such recommendations are transmitted to the referring physician. He may then pursue a course of further examination through private facilities or recommend admission to the Hospitals of the Creighton University or the University of Nebraska at Omaha.

During the year of the report, 1,755 physically handicapped children made 4,674 visits. Further investigation on a smaller basis shows: 477 visits to clinics reporting 45 sessions, or an average of 10.6 visits per session. All the visits throughout the state were made to clinics that reported having an orthopedist and a pediatrician on the staff. Also a nursing staff was in attendance at each session, and each session had an auxiliary staff consisting of a physiotherapist, social worker, or other professional staff (exclusive of physicians and nurses) which was employed on full or part-time basis. All of these sessions throughout the state were held by official agencies.

These visits were equivalent to 14.7 per 1,000 child population, a good ratio in comparison with those of eight selected states, as shown in Chart No. 12-A. From this chart it will be noted that the highest showing is 31.5 and the average is 11.3.

PUBLIC HEALTH NURSING SERVICES

There is a considerable shortage of nursing personnel in Nebraska as reflected by the reports from this Study. Nebraska has 93 counties but only 59 full time public health nurses. 44 of these nurses are located in the lesser metropolitan areas and 5 in the adjacent counties, this leaves only 10 nurses for the rest of the entire state. Furthermore, only one of these 10 nurses is located in an 'isolated rural' county, the other 9 being in the 'semi-rural' counties.

Then in the semi-rural counties there is one public health nurse for every 11,511 children. The fifty five rural counties which contain more children than any other division of counties in the state has the deplorable situation of having only one public health nurse. This gives a ratio of one nurse for 111,619 children. It is generally recognized that there should be at least one nurse to 800 children. The only areas in Nebraska that come close to this ideal are the two lesser metropolitan areas, and even they don't measure up, having over twice that many children for each nurse; namely 1,867 children per public health nurse.

Comparing this with our neighboring states we see that for the semi-rural counties South Dakota has one public health nurse for every 5,000 children and Wyoming for every 3,602. Therefore the situation in Nebraska is over twice as bad as it is in South Dakota and three times as bad as in Wyoming. In the rural areas South Dakota has one for every 10,000 children (poor but 11 times better than Nebraska) and Wyoming has one for every 8,111 (over 12 times better than Nebraska).

Of the 59 full time paid public health nurses and the two voluntary nurses 55 reported as to training. One academic year in public health nursing was reported by 20 and none or less than one year was reported by the remaining 35 nurses. These nurses do not include nurses employed by agencies giving only school health, industrial tuberculosis, or venereal disease services; and do not include nurses employed as supervisors by state agencies.

In the lesser metropolitan counties the 45 public health nurses (one being voluntary) made 24,708 home visits to children or 300.7 visits per 1,000 children. In the adjacent counties 6 public health nurses made 2,424 visits or 53.8 visits per 1,000 children, and in the 'isolated' semi-rural counties 9 nurses made 4,114 visits or 39.7 visits per 1,000 children. In the 'isolated' rural counties, the one and only public health nurse for all 55 of the counties, made 256 visits or 2.8 visits per 1,000 children. For the state as a whole 61 public health nurses made 31,502 home visits at the rate of 98.1 per 1,000 children (South Dakota 60.8 and Wyoming 65.4 per 1,000 children.) It will be noted here that while Nebraska's overall rate is better than either South Dakota or Wyoming, yet this state's distribution of the prevailing nurse to the semi-rural and rural areas is eleven to twelve times poorer than either of the two above mentioned states.

Only 7 counties reported that they provide complete nursing services, i.e. assistance in well-child clinics, home visits for health supervision, bedside nursing care, and school services. The counties providing these services were the two lesser metropolitan counties, 4 adjacent counties, 1 semi-rural county, and one of the rural counties. These figures are from 92 counties reporting this item.

Comparison of Nebraska with the eight representative states is shown on Chart 12-B.

PUBLIC HEALTH NURSING
Visits Per 1,000 Children Per Year

Highest	Average	Lowest	S. D.	Nebraska
486.8	223.0	65.9	60.8	98.1

Nebraska is somewhat above the lowest state, but a good deal below the average.

5. SCHOOL HEALTH SERVICE

At the time of this survey there were 203,080 children in public elementary schools (age 5 to 14 years) in Nebraska. Of this total number there were 36,789 or 18.1% were without medical service (South Dakota 51% and Wyoming 3.9%), 19,641 or 9.7% were without medical or nursing service (South Dakota 50% and Wyoming 3.9%).

A county is considered to be without school medical service if there is not at least one public elementary school in which medical examinations by a physician are done on (1) all pupils once a year, (2) certain grades over a year or (3) referrals by teachers or nurses.

In the two lesser metropolitan areas there were 51,097 children in the elementary schools, none of which were without medical and nursing care. In the adjacent counties there were 28,951 children and they also had both medical and school nursing care. We do not find the situation to be true in our semi-rural and rural areas; semi-rural 65,332 children, 20% without medical service and 8.9% without medical or nursing service, and rural 57,700 children, 41.1% without medical service and 24% without medical or nursing service.

In Omaha especially, the school physician (Dr. Ernest T. Manning), has very studiously and intentionally followed the practice of referral to the family physician or free clinic of students for physical examination and treatment.†

A Health Officer may be counted more than once if he serves more than one agency. A school physician may be counted more than once if he serves more than one agency (including physicians working full or part time in schools). If a nurse serves more than one county she is considered only in the county of her headquaters. There is an unduplicated count of nurses working full time in schools.

Staff engaged in school health services by county groups:

	Metro-politan	Adja-cent	Isolated Semi-Rural	Isolated Rural
Medical Staff:*				
Number of Health Officers				
School Physicians (total)				
General Practitioners				
Pediatricians				
Other Specialists				
School Physicians Employed				
by official Health Agencies				
by official Education Agencies				
by joining official agencies				
by other agencies				
Nursing Staff:				
Total Number of Nurses	31	13	28	21
Employed by official Health Agencies	0	5	4	0
by official Education Agencies	31	8	19	20
by joint official agencies	0	0	5	1
by other agencies	0	0	0	0
Number employed full time in schools	29	5	16	0

THE PRE-SCHOOL ROUND-UP AND ROUTINE STUDENT EXAMINATIONS

The pre-school round-up medical and dental examinations of entrants into the first year of school are included in the report because these examinations have been made by family physicians and free clinics. They have not been made by school physicians.

The pre-school round-up examinations for children entering kindergartens or first grade in those districts where kindergartens are not operated is under the direction of local Medical Societies, Parent Teacher Association, and Visiting Nurse Association, with some exceptions.

Reports on these examinations have been received from the Nebraska congress of Parents and Teachers, the Lincoln Public Schools and the Omaha Public schools.

These data originated from twenty-four cities in nineteen counties in the state. They represent the extent of such examinations throughout the state, according to all information available. The towns were located in the two counties of the lesser metropolitan area, in three adjacent counties, in eleven semi-rural isolated, and in three isolated rural counties.

I. The Omaha Public School System, Department of Health Service Report and Parent and Teacher Association for September 1946 follows:

Pupils entering kindergarten	2,799	
Pupils having medical examinations	2.366	84.5%
Pupils having dental examinations	891	31.8%
Pupils vaccinated against Small Pox	2,294	82.0%
Pupils immunized against Diptheria	2,243	83.7%
Pupils immunized against Whooping Cough	1,094	39.1%

An analysis of these figures is shown in the following table:

	Exam-ined	%	Vac-cinated	%	Dip-theria	%	No. Immunized Whoop-ing Cough	%
Family Physician Cases	2103	88.9%	1864	88.6%	1904	90.5%	891	42.4%
Free Service Cases	263	11.1%	222	84.4%	227	86.3%	89	33.8%
Not Examined	433	15.5%	208	48.0%	212	49.0%	114	26.3%
Total	2799		2294	82.0%	2343	83.7%	1094	39.1%

It is illuminating to note the definite difference of rates of protection against Small Pox and Diphtheria among those children who did not receive pre-school examinations. The rate of protection against Whooping Cough was not adequate in either classification.

Supplementary to the above data, is the comparison of subsequent years. Examinations as follows:

Number Pupils:	1947		1948		1949	
Entering Kindergarten	2772		2979		2826	
Having Medical Examination	2426	87.5%	2728	91.6%	2616	92.5%
Having Dental Examination	1101	39.7%	1425	47.5%	1483	52.4%
*Vaccinated Small Pox	2333	84.2%	2530	84.9%	2439	86.3%
*Immunized Diphtheria	2388	86.1%	2613	87.7%	2520	89.1%
*Immunized Whooping Cough	1780	64.2%	1608	53.9%	2302	81.4%

Analysis of this comparative table shows an improvement in totals of pupils examined. Forty-seven and a half percent of schools reported that 100% of entrants were examined. (Mr. Don Warner, Director of Child Welfare, Omaha Public School System). The number of entrants that were not examined did not show an appreciable increase in number of immunizations, an average increase of only 6% in the three classifications in the four year period.

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* Almost all agencies in Nebraska reported that they did not have regular school physicians, and that medical service for schools is given under sponsorship of Medical Societies.

† Editor's Note: Since the retirement of Dr. Manning in 1948 Omaha has been without a physician officially connected with the schools.

* These figures obtained from the Total Number of Pupils entering kindergarten.

II. Pre-school examinations were made in twenty-three towns in eighteen counties outside of Omaha in 1947 and 1948, including Lincoln, as follows:

Number Pupils	1947	%	1948	%
Having Medical Examinations	3,363	.	4,100	
Examined by Family Physician	2,258	67.0%	3,700	90.0%
Examined by Family Dentist	981	29.0%	2,107	51.0%
Vaccinated Small Pox	3,042	90.0%	3,687	90.0%
Immunized Diphtheria	3,083	91.0%	3,750	90.0%

Analysis of the results of the out-state examinations showed the percentage of immunizations against Small Pox (90%) and Diphtheria (91%) was among children who received medical examinations.*

If similar calculation is used, i.e. based only on pupils examined, in arriving at estimates in the enrollees in Omaha Schools the comparison is based on the same common denominator and the percentages are as follows:

Number Pupils	1946	1947	1948	1949
Having Medical Examination	84.5%	87.5%	91.6%	92.5%
Vaccinated Small Pox	89.0%	96.1%	92.7%	93.2%
Immunized Diphtheria	90.0%	98.0%	95.7%	96.3%
Immunized Whooping Cough	41.0%	73.3%	59.9%	88.0%

Analysis of these data indicated the effectiveness of education in health matters.

The situation in Omaha is unique in its efficiency and the completeness of the examinations. The examinations are made in the office of the private physician or in the clinic, thus avoiding the handicaps of mass examinations. This practice is the outgrowth of the proposal of the Pediatrists of Omaha over 22 years ago. This plan of procedure was outlined by them at that time with the cooperation of the school physician, Dr. Ernest T. Manning and the Parents and Teachers Association and with the approval of the Omaha Douglas County Medical Society. The subsequent routine medical examinations of the pupils are made after the third and eighth grades of the school course by the family physician or free service clinics of the University of Nebraska and Creighton University Medical Schools.

During the school year pupils requiring medical attention are referred through these channels by the school nurse. The examinations in the state outside of Omaha exclusive of Lincoln have been made by family physicians and medical societies cooperating with the Parents and Teachers Associations.

The examinations in Lincoln are described by Walter N. Foster, Director Health Education and Health Service, in a personal communication as follows:

Immunizations against Diphtheria and Small Pox were performed by a physician assisted by a group of school nurses.

	School Children	Pre-School Children
Diphtheria Toxoid:		
1945-1946	972	309
1946-1947	810	262
1947-1948	1,190	179
1948-1949	1,939	278

	School Children	Pre-School Children
Small Pox Vaccination:		
1945-1946	1,794	305
1946-1947	1,136	295
1947-1948	1,551	179
1948-1949	1,904	158

"Regarding physical examinations for pre-school children from 1947 through 1949, parents of pre-school children were encouraged to take their children to their family physicians for an examination. This advice was given by Dr. Janet F. Palmer, Lincoln Public School Psychiatric and Medical Consultant, during the pre-school conferences which were scheduled in each elementary school throughout the spring.

These conferences replaced the old type "clinic" in which a physician quickly evaluated each child and listened to the heart and in general probably gave the false impression to many mothers that the child had been given a physical examination. These conferences are designed to help mothers understand the need for a physical examination and immunizations and correction of dental defects plus other factors—thus they are of educational value. Each child is given a booklet to be filled out by the family dentist and physician. These are returned to the school nurse when the child enters school in the following September.

Practice in this city reveals that approximately 60% of the children who attend the pre-school conference visit their doctor and dentist."

COMMUNICABLE DISEASE CONTROL

The following is a record of the children immunized by community health agencies during the year of the report, by county group in Nebraska:

	Number of Immunizations Reported			Immunizations Per 1,000 Children		
	Small Pox	Diphtheria	Whooping Cough	Small Pox	Diphtheria	Whooping Cough
Whole State	14,964	15,157	6,196	46.6	47.2	19.3
Lesser Metropolitan	2,837	3,363	202	34.5	40.9	2.5
Adjacent	543	415	177	12.1	9.2	3.9
Isolated Semi-rural	9.299	9.270	5,183	89.8	89.5	50.0
Isolated rural	2,285	2,109	634	25.3	23.3	7.0

The number of immunizations in the above list are those reported in 32 counties. It is not known whether immunizations are given in all other counties. Also this report is not entirely correct since adults were included in the returns from two agencies reporting a total of 1,102 immunizations.

TUBERCULOSIS

The data on the tuberculosis situation are included in this report because it demonstrates two principal features in the overall health picture. First there is the incidence of the disease, and secondly, there is a valuable health education phase especially with the High School students and their parents.

The campaign against tuberculosis in Nebraska has been active. The efficacy of this campaign together with the natural phenomena, and the epidemiologic situations in the state and the country as a whole (see Chart No. 13) has had a beneficial effect on the child insofar as exposure to this disease is concerned. As noted in Chapter I the colored population in Nebraska is largely concentrated in Omaha—to the number of 5.4% of the city's population. Although the incidence of infection (by tuberculin test) is 60% to 80% higher among these individuals, nevertheless there is no staistical influence on the tuberculosis incidence for the state as a whole.

In retrospect, the highlights of this campaign have been:

(1) The program to eliminate Bovine Tuberculosis was under way in 1917. On June 1, 1936 Nebraska became the fortieth state to be accredited by

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* Total number of entrants not known.

the United States Department of Agriculture as practically free from Cattle Tuberculosis.

(2) The opening of the Nebraska State Hospital for Tuberculosis at Kearney in approximately 1919. The children's section was completed in 1947. The new Douglas County Hospital opened and provided hospitalization for diagnosis and treatment of tuberculosis, in 1932.

(3) The first county wide Tuberculosis Survey in Nebraska began in 1936 in York county. This was directed by a committee representing the State Board of Control, the State Department of Health, the State Medical Association, and the Nebraska Tuberculosis Association. Dr. E. W. Hancock of Lincoln was the first chairman. The tuberculin test was used. The first group testing was used in the Omaha schools in 1933. An important phase of this testing campaign included the preliminary health education preparation to children and adults, and the follow up work.

Tuberculin testing is continued. During the last year testing was carried on in ten counties and thirty-six clinics were conducted in Omaha. In Omaha 3,485 persons (high school groups) were tested, with 20% positive reactions. Of the positive reactors, 95% were x-rayed, and in some schools 100%. This represents a valuable health measure, not alone in tuberculosis, but as an educational factor in preliminary and follow up work.

(4) Health camps for children have been operated by the Lincoln and Lancaster County Tuberculosis Association in 1929 to 1932. The children's health camp at Omaha was opened in 1930. This camp is owned and operated by the Nebraska Tuberculosis Association, but the operating funds come from the Good Fellows of the Omaha World-Herald. The Lyons Club, of Omaha, rebuilt and equipped the camp buildings (formerly housing the Detention Hospital) and continue to maintain the improvements and the landscaping of the fifteen-acre camp site.

Forty-four children are yearly enrolled in this camp for two months in the summer. These children are examined at the dispensaries of the medical schools of the University of Nebraska and the Creighton University. All enrollees are vaccinated against small pox, and immunized against diphtheria, tetanus, and typhoid fever. Remedial defects are corrected before going to camp. Health education classes are also conducted for the mothers during the camp period.

(5) The chest X-ray Survey with mobile x-ray units, was begun by the Tuberculosis Control Division of the Nebraska State Department of Health in 1944. The Nebraska Tuberculosis Association aided in educational and follow up work. In 1947 a total of 70,072 minature films were taken.

In the community surveys the attempt is made to x-ray all, including high school aged children but to discourage the routine chest x-ray of children under twelve years of age.

Approximately 28% of the total number x-rayed represented individuals under eighteen years of age. The total number of minature photo fluorographic chest x-rays taken in the survey as of July 1, 1949 was 299,410. Of the diagnosis of the total x-rays per year:

X-rays characteristic of tuberculosis and suspicious of tuberculosis	1.3%
X-rays above and other pathology	4.1%

7. DENTAL SERVICE

In referring to a dental clinic we mean one that gives dental care other than examinations. Number of children making visits to dental clinics in one year for services other than examinations totaled 1,054 (767 school, 3 pre-school, and 284 not reported separately). The number of dentists hours were 1,381. The total number of visits was 3,261 (2.121 school children, 4 pre-school, and 1,136 net separately reported) for other than examinations. The total number of dental examinations was 5,993. 734 of these children patients were taken care of by official agencies and 320 by voluntary agencies. All of this service was in the lesser metropolitan counties with 18 of the total dentist hours being supplied from an official source from an adjacent county.

Dentist hours were in the ratio of 4.3 per 1,000 children for the entire state (South Dakota 0.7 and Wyoming 0.6) and the dental examinations were 18.7 per 1,000 children (South Dakota 17.2 and Wyoming 0.9). The ratio of dental examinations to patients given service was 5.7.

The number of patients were 3.3 for the state, and 12.8 for the lesser metropolitan district (8.9 official and 3.9 voluntary); the number of visits 10.2 per 1,000 children for the state and 39.7 for the lesser metropolitan district (Wyoming 1.3 and 1.9 respectively).

For comparison of the number of dentist hours per 1,000 children under 15 years of age provided under community health service by official and voluntary agencies during one year:

Eight Representative States:

Highest—Maryland, District of Columbia	109
Lowest—New Mexico	2
Average	22
Wyoming	0.6
Nebraska	4.3

In the eight selected states about 20 children per 1,000 per year are receiving dental care under community programs. In Nebraska the figure is about 3.3. "One characteristic of good dental care for children is the preponderance of fillings over extractions. Provided both are freely available the filling-extraction rate may be taken as a rough index of the extent to which preventative dentistry is applied. For the seven representative states, New Mexico not reporting:

Highest—Oregon	10.5
Lowest—North Carolina	0.9
Average	3.9
Nebraska	1.48

This shows Nebraska considerably below the average in this respect; however in interpreting the above data on the filling-extraction ratios, it should be remembered that some states having high ratios provide very little in total service. Thus Oregon and New Hampshire which have the highest and second highest filling-extraction ratios rank fifth and sixth in dentist hours per 1,000 children. Maryland, District of Columbia and North Carolina, which rank last and next to last respectively, in filling-extraction ratios are first and third in dentist hours of service. A.J.P.H., Vol. 38, No. 1, Jan., 1948, p. 79, Williams, Hubbard and Bain.

Dental examinations of school children in most parts of the country are sorely wanting and it is estimated that probably not more than 25% receive adequate care. There are no dental clinics in the semi-rural or rural counties of Nebraska. Also in this state both total dental service and fillings-extraction ratio are below the average.

The Nebraska State Medical Journal

Sharp Building, Lincoln, Nebraska
Federal Securities Building, Lincoln, Nebraska

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Subscription $2.50 Per Year. Single Copies 35c Each

The Publication Board does not assume responsibility for opinions expressed in original articles published in this Journal.

Manuscripts should be typewritten, double-spaced, and the original, not the carbon, submitted.

Reprints should be ordered from the printer, The Huse Publishing Co., Norfolk, Nebraska.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

Vol. 36 January No. 1

THE A.M.A. TWELVE POINT PROGRAM

1. Creation of a Federal Department of Health of Cabinet status with a Secretary who is a Doctor of Medicine.
2. Promotion of medical research through a National Science Foundation with grants to private institutions which have facilities and personnel sufficient to carry on qualified research.
3. Further development and wider coverage by voluntary hospital and medical care plans to meet the costs of illness, with extension as rapidly as possible into rural areas.
4. Establishment in each state of a medical care authority to receive and administer funds with proper representation of medical and consumer interest.
5. Encouragement of prompt development of diagnostic facilities, health centers and hospital services, locally originated, for rural and other areas.
6. Establishment of local public health units and services.
7. The development of a program of mental hygiene with aid to mental hygiene clinics in suitable areas.
8. Health education programs administered through suitable state and local health and medical agencies to inform the people of the available facilities and of their own responsibilities in health care.
9. Provision of facilities for care and rehabilitation of the aged and those with chronic disease and various other groups not covered by existing proposals.
10. Integration of veterans' medical care and hospital facilities with other medical care and hospital programs and with the maintenance of high standards of medical care.
11. Greater emphasis on the program of industrial medicine.
12. Adequate support with funds free from political control, domination and regulation of the medical, dental and nursing schools and other institutions necessary for the training of specialized personnel required in the provision and distribution of medical care.

ORGANIZATION SECTION

LAST CALL FOR PAPERS

If you wish to present a paper before the Annual Assembly of the Association send your title to Dr. R. B. Adams in the Sharp Building without delay. This is the last announcement and no papers will be accepted after February 1, 1951.

ANTI-TRUST DECISION

Two years ago the federal government charged that the Oregon State Medical Society, a number of county societies and several physicians had violated the Sherman anti-trust act by attempting to monopolize the field of pre-paid health insurance. A short while later the U. S. Department of Justice began investigating many other state associations, as well as the AMA, in an effort to uncover evidence to substantiate the filing of similar charges against other sectors of the medical profession.

The government alleged in Oregon that the defendants had sought a monopoly by refusing to deal with private agencies and by disciplining physicians who did deal with them.

In handing down his decision recently, Judge Claude McColloch wrote: "I hold that the Oregon Physicians Service is not a conspiracy but rather an entirely legal and legitimate effort by the profession to meet the demands of the times for broadened medical and hospital service, eliminating the evils of privately owned concerns as well as the element of private profit."

This decision has set a strong precedent for the determination of such charges as may be filed in the future. It also throws a road block in front of the administration's efforts to publically condemn and ridicule the medical profession.

FEDERAL AID TO MEDICAL COLLEGES

One of the bills sure to receive Congressional action this year is Federal Aid to Medical Education. The socialists are bound to renew their attempts for this piece of legislation. As you will recall, this proposal was one of the original sections of the national compulsory health insurance bill.

When it became apparent that the entire bill could not be passed as a "package," its various sections were broken down into separate bills, now known to the medical profession as "fringe legislation." Federal Aid to Medical Education is one of these.

The strategy to be expected in 1951 from Oscar Ewing and his band in support of this measure was recently outlined by Ewing in a speech at New York. He said ". . . our national safety is dependent on having more practicing physicians and Federal Aid to Medical Education is the solution to the problem.

"In a period of mobilization, when our troops are committed in Korea and when we are building an armed force of millions of men, it is more than serious (shortage of doctors). It is critical."

Dr. Joseph Lawrence, Director of the AMA's Washington Office, made an interesting observation on this subject at the regional legislative conference held at Omaha in November. He said that some medical school deans and private physicians are in favor of this bill if it can be written in such a manner that no federal "strings" are attached.

He then pointed out that the Hill-Burton hospital construction act was passed with every possible precaution taken against such "strings." Within a few weeks after its passage, Dr. Lawrence noted, the Federal Security Agency began sending directives and regulations to those communities who had and were to receive federal grants.

COST OF DOCTORING

One of the interesting items you may have missed was Dr. Frank Dickinson's statement on the cost of medical care. Dr. Dickinson is Director of the AMA Bureau of Medical Economic Research.

He showed that the cost of medical care has not risen as high or as rapidly as the cost of living. The cost of medical care, including drugs, for 1949 was 45 percent higher than the normal years of 1935-39. But the cost of living went up 69 per cent.

A breakdown of medical fees shows that the doctors' fees were up 38 per cent; dentists' fees up 51 per cent; prescriptions up 37 per cent; and hospital fees up 127 per cent. It should be noted, however, that the average hospital stay was shorter, so the patient's bill went up only 67 per cent.

MATERNAL AND CHILD HEALTH COMMITTEE

A meeting of the Maternal and Child Health Committee was held Monday afternoon, November 13, 1950, in the headuarters office of the Nebraska State Medical Association, 1315 Sharp Building, Lincoln. Present were committee members Drs. R. E. Garlinghouse, Chairman, Lincoln; R. W. Homan, Crete; L. S. McGoogan, Omaha. Also present were Dr. C. H. Sheets, President, Cozad; Dr. Frank Ryder, Director, Department of Health, State Capitol, Lincoln; Dr. Mary S. Bitner, Director of the Maternal and Child Health Division of the Department of Health, State Capitol, Lincoln; M. C. Smith, Executive Secretary, Lincoln; Sidney Bradley, Executive Assistant, Lincoln.

VISITING NURSE'S INSTRUCTION MATERIAL

Dr. Bitner stated that the instructions as adopted by the Maternal and Child Health Committee several years ago are now inadequate and antiquated. She asked that the committee replace these instructions with two newer booklets entitled "Prenatal Care" and "Infant Care" which were published by the U.S. Children's Bureau. Dr. McGoogan moved that these booklets be adopted. The motion was seconded by Dr. Homan and carried.

RESPONSIBILITY IN MATERNAL DEATHS

Dr. Bitner asked the committee's opinion as to whether or not the questionnaires regarding maternal deaths should continue to be sent out. The question was then raised as to whether or not some group should be charged with fixing responsibility in maternal deaths. Dr. Garlinghouse stated this had been done in Philadelphia and that it had apparently materially lowered such deaths. He added that the Maternal and Child Health Committee could not assume this work without the permission of the House of Delegates.

Mr. Smith suggested that the questionnaires returned over a 10-year period be analyzed by the committee on a confidential, case history basis, eliminating all names and identification. Dr. Ryder stated that the questionnaires could be made available to the committee for this purpose. Dr. McGoogan made a motion that the survey be made. The motion was seconded by Dr. Homan and carried.

It was also agreed that the committee will include in its report to the Council and House of Delegates a request that it be given authority to fix responsibility in maternal deaths. It further recommended that the questionnaires on maternal deaths continue to be sent out.

CIRCUIT POSTGRADUATE COURSES IN OBSTETRICS AND PEDIATRICS

Dr. Bitner said that the Maternal and Child Health Division of the Department of Health would in the next few months sponsor postgraduate courses in obstetrics and pediatrics in North Platte, York, Norfolk and Beatrice. One was just recently held at McCook. As in the past, she said these courses would be planned on a Councilor District basis.

Dr. Bitner also asked the committee's advice as to the method of arranging for attendance at the annual obstetric and pediatric meeting to be held in Omaha at the University of Nebraska College of Medicine in April. She said that the meeting last year was restricted to one doctor from each Councilor District and that the attendance was rather poor. Mr. Smith suggested that the Maternal and Child Health Division of the Department of Health determine how many doctors can be accommodated and then inform Nebraska physicians that the first applications received up to that number will be accepted. The committee thought this would be an equitable procedure.

Dr. Garlinghouse also urged that the meeting be moved ahead to March or late February instead of being held in April. He reasoned that the April date was too close to the date of the Annual Session of the Nebraska State Medical Association, which will also be held in Omaha in 1951. He asked that Dr. Bitner send him all pertinent information about the meeting so that it could be incorporated into the committee's report to the Council. The committee also agreed that this information should be placed in The Nebraska State Medical Journal and in a bulletin.

COLORADO PREMATURE CARE CONFERENCE

At the request of Dr. Bitner, the committee gave its approval to the sending of a Nebraska doctor to the Colorado Premature Care Conference. It was also recommended that Dr. Dwight Brigham of the University of Nebraska College of Medicine be the one selected to attend the conference.

MATERNAL AND CHILD HEALTH FUNDS

Dr. Ryder related that the Maternal and Child Health Division had some funds which could be spent for a worthwhile program submitted by the committee. Dr. Garlinghouse felt that some of the money should be allotted to the Speakers Bureau for sponsoring obstetric and pediatric meetings and speakers throughout the state. Dr. Ryder said that the money could be used for this purpose but that it would have to be administered through the state Department of Health. The chairman stated that he would notify the Speakers Bureau of the availability of these funds.

BOARD OF CONTROL

The Board of Control of the State of Nebraska forwarded a request for information and approval of a set of rules which they wish to put into practice in the Orthopedic Hospital and perhaps later in some of the other institutions. This request has been presented because of the fact that the Board of Control wishes to follow ethical practices and does not wish to institute any rules or regulations governing the medical operation of any state institutions without first submitting their proposed actions for official approval by the Nebraska State Medical Association. This problem was assigned to the Committee on Maternal and Child Health by Dr. C. H. Sheets, President.

Mr. Smith presented the following set of rules and regulations which had been forwarded to him by the Board of Control for approval or disapproval:

1. The Orthopedic Hospital, as a tax supported state institution, shall be considered as essentially a charity hospital and should not be in competition with private or other nonprofit hospitals. No patient should be accepted except in accordance with the statutes of Nebraska.

2. Patients who are able financially to pay regular hospital and medical fees shall be discouraged from seeking hospitalization in the Orthopedic Hospital, unless the desired service can not be secured elsewhere.

3. The superintendent of the hospital shall serve the institution on a full time basis and shall not engage in the private practice of medicine. His salary shall be paid out of state funds.

4. Medical staff members shall receive a guaranteed salary decided by the Board of Control. All funds collected for medical service used to apply on the guaranteed salary of the staff members shall be deposited in the office of the State Treasurer. (See Section 83-303).

5. The Board of Control will be mindful of the fact that a polio epidemic or other circumstances may, on occasion, increase the amount of medical service required of the staff. Under such circumstances their fixed salaries will be supplemented in accordance with services rendered.

6. All fees for medical service should be collected through the superintendent's office at rates agreed upon by the staff members. The staff members shall have access at all times to records indicating the source and the amount of medical fees collected. All checks shall be made out jointly to the Chief of Staff and the Superintendent of the institution and deposited with the State Treasurer.

7. No staff member or other employee shall collect or determine individual medical fees.

8. Staff rules recommended by the staff and approved by the Board of Control shall be strictly observed from this date. Rules shall be reviewed by the staff once a year to determine whether still applicable.

After complete discussion, Dr. McGoogan moved that the committee should approve these rules and regulations as proposed by the Board of Control to be used in operation of the Orthopedic Hospital and perhaps other state institutions. The motion was seconded by Dr. Homan and carried.

The meeting adjourned.

CEREBRAL PALSY COMMITTEE

The Cerebral Palsy Committee met Friday evening, December 1, 1950, at the Lincoln University Club. Present were committee members Drs. Louis Campbell, Chairman, Omaha; Fred Ferciot, Lincoln; John Thomas, Omaha; S. L. Wolters, Lincoln. Also present were Dr. D. B. Steenburg, President-Elect, Aurora; Dr. R. B. Adams, Secretary Treasurer, Lincoln; Dr. E. W. Hancock, Lincoln; M. C. Smith, Executive Secretary and Sidney Bradley, Executive Assistant, Lincoln.

READING OF THE MINUTES

The minutes of the meeting held November 14, 1950, were approved without reading since each member of the committee had previously received a copy for approval.

STATE ORTHOPEDIC HOSPITAL FACILITIES

At its last meeting the committee discussed the facilities that might be available at the State Orthopedic Hospital for the establishment of a consultation, diagnostic, therapeutic and rehabilitation unit for cerebral palsy patients in Nebraska. It was revealed at the last meeting that such facilities might be available at the hospital.

Mr. Smith said he had discussed the subject with the Board of Control and that they seemed receptive to the plan. Dr. E. W. Hancock, Chief, Services for Crippled Children, Department of Assistance and Child Welfare, Nebraska Board of Control, also stated that he was in favor of the plan. According to the committee's plan this unit would consist of from 12 to 15 beds. The proposed requirements for such a unit were submitted in writing by Dr. Thomas.

Dr. Hancock pointed out that additional funds would need to be appropriated by the Nebraska Legislature if such a unit were established. He said that if the committee favored the setting up of the unit, it should send this recommendation immediately to the Board of Control in order that it can be provided for in the Board of Control budget which is now being prepared.

Dr. Thomas moved that the following recommendation be sent to the Board of Control:

The Cerebral Palsy Committee of the Nebraska State Medical Association at a regular meeting held December 1, 1950, unanimously recommends that any existing facilities in the state at this time for both in-patient and out-patient care of cerebral palsied children be utilized. It further recommends that a 12 to 15-bed unit at the state Orthopedic Hospital might be used for this purpose.

The Nebraska State Medical Association realizes that considerable good work is already being done but that further expansion of this education and training program would be desirable. The committee reviewed the attached tentative outline of required personnel and expense as submitted by Dr. Thomas and Dr. Hancock. Further consultation with other individuals who have had experience in setting up such units is strongly urged.

The motion was seconded by Dr. Ferciot and carried.

Meeting adjourned.

NEWS and VIEWS

The University of Nebraska College of Medicine through the MCH will offer a postgraduate course in Pediatrics and Obstetrics the last week in April. Registration will be limited to 25. Applications will be accepted in order as they are received. This will be a refresher course in the two subjects and the program will have eight guest speakers, four in Pediatrics and four in Obstetrics.

The Nebraska State Chapter of American Academy of General Practitioners will have a one day meeting at the Lincoln Hotel, Lincoln, Nebraska, on Thursday, April 12, 1951. The meeting will start at 9:00 a.m., and there will be no charge for registration. All doctors of the state are invited to attend.

The program:

"Treatment of Uncomplicated Fractures" (Barnyard Fracture), James K. Stack, M.D., of Chicago, Ill.

"Problems of Thrombo Embolic Disease," John Hartigan, M.D., of Omaha, Nebr.

"Management of Common Eye Diseases in the Office," J. Hewitt Judd, M.D., of Omaha, Nebr.

"Management and Treatment of Burns," Charles W. McLaughlin, M.D., of Omaha, Nebr.

Guest dinner speaker at the evening dinner will be Dr. Murphy, Dean, Kansas University Medical School.

Dr. Lester D. Odell, Chairman of the Department of Obstetrics and Gynecology at the University of Nebraska College of Medicine, has received a $2,900 grant from the Eli Lilly Research Laboratories. The money is to be used to carry on an investigation for the use of acid exchange resin for toxemia of pregnancy.

Eighty-five per cent of Omaha public school 1950 eighth graders had complete physicial examinations —mostly by their own physicians.

This was reported by by Dr. Harry A. Burke, superintendent of schools, in his weekly bulletin.

Parents of the pupils were asked to have them examined and to make the findings available to the schools for guidance in health matters, Dr. Burke wrote.

The project was sponsored by the Omaha Council of Parents and Teachers and was carried on as a joint activity of the Council and the Health Service Department of the public schools.

Nebraska's third and largest Veterans Hospital, a 14-story, 500-bed institution which cost approximately $11,000,000, had its formal dedication Sunday, December 3, in Omaha, when Carl R. Gray, Jr., Veterans Administration director, returned to the city to dedicate the structure for which he also had broken ground at ceremonies on June 24, 1948. Construction work, however, had gotten under way March 26, 1948, when groundleveling had been started for the structure which, with its auxilliary buildings, stands on a 40-acre tract immediately adjoining Douglas County Hospital. Nearly 25,000 residents of the community coursed through the vast new structure during the eight hours following the dedication ceremonies.

A four-day celebration marked the dedication and formal opening of the beautiful new 72-bed West Point Memorial Hospital, December 7-10, in which the entire community joined to express its pride in the new structure and its happiness in witnessing the achievement of an extensive campaign extending over the past six years to provide Cuming County with adequate and suitable hospital facilities.

Omaha-Midwest Clinical Society members at their annual meeting on November 27th installed Dr. Alfred Brown as their leader for 1951, and at the same time chose Dr. J. Harry Murphy as President-elect, to take office December 1, 1951. Dr. Louis E. Moon, retiring president, will continue the duties of secretary-treasurer which he previously had held. Dr. Herman Jahr was elected to the Executive Committee and Dr. Donald J. Wilson as Director of Clinics. Dates for the 1951 meeting were scheduled for October 20 to November 2, in Omaha.

U. S. MATERNAL DEATH RATE ESTABLISHES NEW LOW RECORD

For the first time in history, the maternal death rate for a large nation has been pushed slightly below the apparently irreducible minimum of one per 1,000 live births, according to the November 25 Journal of the American Medical Journal.

This record was set in 1949 by the United States, based on preliminary reports, said the Journal. When the 1949 rates for Sweden, Norway, Denmark, the Netherlands and New Zealand become available, one or more of these small countries with a homogeneous population may join the select circle, the publication added.

The new record, it was pointed out, compares with 1.2 maternal deaths per 1,000 live births in 1948 and with 6.2 in 1933. On that basis, the Journal concluded that "childbirth has been made quite safe."

In 1949 there were 30 states with rates less than 1.0, two at evactly that level and only 17 above.

"The fact that the chances of an expectant mother surviving the diseases of pregnancy, childbirth and the puerperium are now better than 999 out of 1,000 is truly a story of human and social progress," said the Journal. "An examination of the rates for the different states indicates areas in which further improvement can be expected, but it is clear that maternal mortality is no longer a nationwide problem."

The reduction in the death rate from 1933 was attributed to several factors: (1) an increasing percentage of births in hospitals, although improvements in the medical care provided in home births have been pronounced; (2) development of prenatal care; (3) health education; (4) the administration of sulfonamides, antibiotics, whole blood or blood derivatives, and (5) improvement in training in obstetrics.

Unlike the trend in many nations, the number of births attended by midwives in the United States is being rapidly reduced, it was pointed out.

NATIONAL CONFERENCE TO STUDY CHRONIC ILLNESS

The first national conference of the newly organized national Commission on Chronic Illness will be held in Chicago at the Edgewater Beach hotel on March 12, 13 and 14, it was announced today.

The aim of the conference, according to Dr. Morton L. Levin, Chicago, staff director of the commission, is to determine how the chronic disease problem—the nation's No. 1 health problem—can be attacked at its roots through prevention.

Present day scientific knowledge regarding prevention and early detection of major chronic disease will be reviewed at the meeting. Some of the major chronic diseases to be studied are: cancer, heart disease, arthritis, rheumatism, diabetes, blindness, deafness, tuberculosis, syphilis, and neuro-muscular disorders such as poliomyelitis, multiple sclerosis, cerebral palsy and epilepsy.

Emotional factors in chronic disease; malnutrition, including obesity, as causes of chronic disease; heredity, and occupational causes also will be considered, said Dr. Levin.

The national Commission on Chronic Illness was founded in 1949 by the American Medical Association, American Hospital Association, American Public Health Association and the American Public Welfare Association. It is now an independent national agency studying the common denominators—the similar medical-social-economic problems presented by various forms of chronic illness and disability.

Co-sponsors of the national conference on preventive aspects are the National Health Council and the U.S. Public Health Service.

ASKS DOCTORS' AID IN FIGHTING COMMUNISM

In a guest editorial, appearing in the November 25 issue of the Journal of the American Medical Association, John Edgar Hoover, director of the Federal Bureau of Investigation, asks "the physicians of America, like other citizens," to help protect the nation's internal security.

He asks doctors to report immediately to the FBI "any information of this nature which might come into their possession."

"The FBI," he said, "is not interested in opinions or ideas, idle rumor or malicious gossip — only in facts. Like you, as physicians, we want to know the unvarnished facts of the case. To fulfill our responsibilities, we seek to determine all available facts and then forward them without comment or evaluation to the Department of Justice.

"Americans can defeat the Communist challenge —and in a democratic manner. Witch hunts, hysteria and vigilante actions are repugnant to the democratic tradition. They weaken the majesty of law and provide the Communist agitators with additional talking points. If each person in America would stop and think, learn to 'peel off' the 'outer skin' of Communism, often deceptively painted with glittering promises and glorious utopias, and recognize Communism for what it is—terror and injustice —then America would have no fear.

"The keys of victory must be alertness, eternal vigilance and the maintenance of calmness. A healthy nation, like a healthy body, must receive the unstinting cooperation of all its component parts; if one part fails to carry its share the whole organism is weakened. America, at this critical hour, must remain strong and healthy. This is the task of each and every person."

A new report on the nation's cancer services and facilities has just been made available for the country as a whole and for each state and territory.

The report, prepared by the National Cancer Institute, is intended to serve as a source book to persons engaged in cancer activities. Local groups will find the report useful in evaluating existing cancer facilities and services against existing needs.

In addition to the national summary, the report contains an analysis of each state's cancer legislation, statistics on cancer deaths, number of physicians and registered hospitals, amount of funds available for the official state cancer program, names and locations of cancer clinics and cancer detection centers. Presented for the first time is information on such items as the availability of cytology test services, follow-up services for cancer patients, home nursing services, and home medical care services rendered by hospitals.

According to this report, in Nebraska cancer causes approximately one death in every six or a total of about 2,100 each year.

There are 14 cancer clinics in the state as follows: Brady Clinic, Ainsworth; Lutheran Hospital, Beatrice; Mary Lanning Hospital, Hastings; Wycoff Clinic, Lexington; Lincoln General Hospital, Lincoln; St. Catherine Hospital, McCook; St. Mary's Hospital, Nebraska City; Our Lady of Lourdes Hospital, Norfolk; St. Mary's Hospital, North Platte; Immanuel Hospital, Nebraska Methodist Hospital, Creighton Memorial St. Joseph's Hospital, University of Nebraska Hospital, and St. Catherine's Hospital, Omaha.

Cytology test services are available from private physicians in Omaha.

The State has approximately 1,600 physicians, 91 general hospitals which meet the requirements for registration by the American Medical Association, and 5,400 general hospital beds.

Omaha and Hastings are the only two cities which have visiting nurse associations.

The state has passed no legislation dealing with cancer.

WOMAN'S AUXILIARY

MID-YEAR REPORT ON AUXILIARY ACTIVITIES

The auxiliaries have, for the most part, enthusiastically embarked on carrying out the program outlined this fall by our state president, Mrs. Glenn D. Whitcomb.

Many of them have actively participated in the fall elections, used the Speakers' Bureau, shown the cancer and other informative films on health, secured "grass roots" resolutions from local organizations for voluntary health insurance, and launched contests to secure more subscriptions to "Today's Health."

Several auxiliaries have already had programs on legislation — local, state, and national — which affects health and medicine. They also studied the Constitution and By-Laws of the auxiliary. There have been two programs on the study of the American Medical Association and its functions, and four programs on Voluntary Prepayment and Hospital Care Plans — Blue Shield and Blue Cross.

Some auxiliaries have had joint meetings with their husbands. Many have done sewing and other services in hospitals. Quite a few have tried to have a closer association with the nurses by inviting them to some especially planned event during the year.

Mrs. Glenn D. Whitcomb has been guest speaker at three different meetings in various parts of the state.

In December most of the meetings were social, but many auxiliaries sponsored some Christmas philanthropy. All the auxiliaries should make use of the Speakers' Bureau, and the interesting health films available at the Executive Secretary's office in Lincoln.

In January the essay contest, "Medicine's Role in Preserving the American Way of Life," will be launched in every high school in Nebraska. In order to make this important project a success, every doctor's wife in every town of every county throughout the state should be ready and willing to pitch in and help.

MRS. ISAIAH LUKENS IV,
Chairman Program and Health Education.

MRS. GOULDMAN PRESIDENT OF MEDICAL SOCIETY AUXILIARY

Mrs. Carl Gouldman was elected president of the Adams County Medical Society Auxiliary for 1951 at a meeting held recently at the Hastings State Hospital.

Mrs. Milton Anderson was named vice president and Mrs. O. A. Kostal, secretary-treasurer.

The group met with the Adams County Medical Society. The business meeting was conducted by Mrs. D. W. Kingsley.

Contributions were made to a fund with which to purchase gifts for patients at the Hastings State Hospital.

MRS. L. W. RORK, Publicity Chairman.

NEBRASKA STATE DEPARTMENT OF HEALTH

The addition of fluorine or any compound thereof to a water supply which is being or may be used as a source of water for drinking or culinary purposes is hereby declared to be a menace to health and is prohibited unless made under conditions complying with the provisions of these regulations.

Permit Required: The addition of fluorine in any form to a drinking water supply shall be in accordance with conditions and subject to a system of controls as specified in a permit issued by the Department of Health. Applications for permits shall be in writing and shall identify the fluorine compound to be used, the dosage to be employed, describe the equipment to be used, the manner of its employment and outline the system of laboratory controls to be used as checks that a correct dosage has been applied and properly disseminated throughout the supply. The application shall be signed by local governmental officials responsible for the water supply and/or local health jurisdiction in the area involved. Departmental approval and its continuance will be conditioned on the following:

1. The municipality shall have, by ordinance, authorized the proposed treatment of the water supply.

2. Compliance with industrial hygiene standards.

3. Repeated analysis of the supply under consideration shall have been made so that its initial fluorine content and that of other substances, the recognition of which are necessary in connection with fluorine analysis and control, together with normal variations, are known and on record.

4. Planned dosage shall be for the addition of sufficient fluorine compounds to result in a final total fluorine content in the water of not to exceed 1.2 parts fluorine per million parts of water. Operation shall be such that the fluorine content at no time exceeds 1.5 parts per million.

5. Fluorine feed apparatus may be either of the solution or the dry feed type. It shall be of a design that automatically varies the rate of application of fluorine to the rate of flow of water. The point at which the chemical is added to the water shall be such that a uniform distribution throughout the water supply will result.

6. Analysis of the water for control purposes shall be in conformity with the needs of each supply as outlined in the permit. In general they will consist of samples examined at weekly intervals for the first two years of application and monthly samples after that period. Daily analyses of not less than one representative sample shall be made by those locally responsible for the supply.

7. Analyses, excepting those made locally by the plant management, shall be made by either the Division of Laboratories of the Department of Health or by another laboratory approved by the Department for the purpose. In the event the laboratory making analysis is other than the Department Laboratory, such laboratory shall furnish the Department a statement of the results of all such analysis. Daily analysis made locally shall be by an individual who has satisfied the Department of his competence to perform the chemical analyses required and has been approved for the purpose.

8. Records of the application of fluorine compounds shall be kept. These records shall show the amount of water treated each 24 hours, the identity and weight of fluorine compounds added and the results of all analyses, and any known irregularities of operations or control. Duplicates of such records shall be furnished the Division of Dental Health of the Department of Health at monthly intervals.

9. The permit issued for the application of fluorine to water for potable purposes may be suspended or revoked by the Department at any time for misapplication of treatment or for failure to apply control measures, which misapplication or failure in the opinion of the Department, results or may result in a menace to the health of those using the supply.

Definition: By "Department" or "Department of Health" as used in these regulations is meant State of Nebraska, Department of Health.

BUY U.S. SAVING BONDS

Buy U.S. Saving Bonds

KNOW YOUR BLUE SHIELD PLAN

More than 3,000 Nebraskans were added to the Blue Cross-Blue Shield rolls as a result of the special Non-Group enrollment campaign conducted during October. During the thirty-day campaign, the regular Non-Group enrollment requirements were waived to permit anyone under age 65, regardless of employment status, to apply for membership.

Reminder: Blue Cross cannot pay hospitals for their services to Blue Cross members until the physician has submitted his report of final diagnosis. By promptly reporting all final diagnoses, doctors make it possible for Blue Cross to process cases without delay, and thus make prompt payments to hospitals.

All Participating Physicians in Nebraska will have an opportunity to strengthen their public relations program, with little or no effort on their part. They are being offered a supply of cards designed for enclosure with their monthly statements. These combination message and reply cards will be furnished to them without charge, in the quantities they request. One half of the card carries a brief message to the patient, pointing out the advantage of prepaid hospital-medical care. The other half of the card may be detached, filled out and mailed by the patient to Blue Cross-Blue Shield. By this easy method of suggesting prepaid health care, physicians can indicate that they have their patients' welfare at heart. Blue Shield Liaison Chairmen of each of the county societies are circulating sample cards and order lists among the members of their societies. Participating Physicians in Omaha and Lincoln have received sample cards, and will order their supply individually.

G. Prentiss McArdle attended a meeting of the Case Procedures Committee of the Blue Shield Commission in Cleveland, Ohio, on December 2, 3 and 4.

NEBRASKA MEDICAL SERVICE

BALANCE SHEET

November 30, 1950

Assets:		
Cash in banks	$156,440.51	
Premiums in process of collection	15,724.55	
U. S. Bonds (cost plus accrued interest)	351,273.12	
Total Assets		$523,438.18
Liabilities, Reserves and Surplus:		
Accounts payable, Blue Cross	$ 11,556.38	
Accounts payable, monthly invoices	742.79	
Accrued payroll taxes	116.80	
Claims reported but unpaid	3,142.00	
Unearned premiums	132,323.22	
Total Liabilities		$147,881.19
Reserves for:		
Unreported Claims	$124,282.82	
Maternity Care	149,969.70	
Bonuses	2,595.23	
Collection Losses	1,500.00	
Total Reserves		$278,347.75
SURPLUS:		$ 97,209.24
Total Liabilities, Reserves and Surplus		$523,438.18

INCOME AND EXPENSE

November, 1950

Income:	Month of November	11 Months to Date
From dues	$ 123,981.44	$1,213,464.84
From enrollment fees	2,380.00	21,386.00
Interest, U. S. Bonds	125.00	1,729.18
Miscellaneous	247.00	373.00
	$ 126,733.44	$1,236,953.02
Expenses:		
Claims	$ 133,357.09*	$1,101,096.02
Administrative Expense—		
Regular	10,655.99	107,560.17
Advertising (50-50)	900.39	9,602.34
Bonuses	333.33	3,666.65
Secretarial fees	416.67	4,583.37
Medical Director	250.00	2,750.00
Advertising	--------	3,838.49
Auditing	--------	840.00
Printing	732.20	5,841.37
Stationery	--------	44.80
Conferences and meetings	--------	3,021.23
Collection expenses	6.50	429.30
Reserve for collection losses	--------	1,500.00
Taxes and licenses	290.14	400.14
Dues	144.42	1,283.90
Actuarial survey	--------	1,031.73
Miscellaneous	17.76	169.98
	$ 147,104.49	$1,247,659.49
Net Gain or Loss	—$ 20,371.05	—$ 10,706.47

*Includes increase of $16,727.67 in Maternity Reserve.
*Includes increase of $5,346.42 in Unreported Claims.

ENROLLMENT SUMMARY

November, 1950

Groups enrolled during November	67
Groups cancelled during November	13
Number of active groups, December 1, 1950	2,914

	Subscribers	Dependents	Participants
Membership, November 1, 1950	59,304	82,433	141,737
Additions	2,618		
Less Terminations	850		
Net Gain	1,768		
Membership, December 1, 1950	61,072	84,890	145,962

CASE REPORT

November, 1950

Number of Services Rendered	3,750
Females	2,195
Males	1,555
Subscribers	1,312
Dependents	2,438

SOCIETIES

Secretaries of county and district societies are requested to send in the minutes of their meetings to The Editor, Mezzanine No. 3, Medical Arts Building, Omaha.

Guest speakers before the Sixth Councilor District, York, on November 13, at Hotel McCloud, were Drs. Leroy W. Lee and Edwin Davis, Jr. Dr. Lee spoke on "The Obstructive Prostate," and Dr. Davis on "Modern Concepts in the Treatment of Mumps Orchitis."

The Holt County-Northwest Medical Society and its Auxiliary met in Ainsworth on Sunday, December 3. At this meeting, Dr. J. P. Brown of O'Neill was elected president of the Holt County-Northwest Association, and Mrs. R. R. Brady of Ainsworth was reelected as president of the auxiliary.

Honored guests were Dr. Charles Sheets, Cozad, president of the State Medical Association, and Dr. and Mrs. B. R. Bancroft, Kearney. Dr. Sheets addressed both groups, and Mrs. Bancroft, president-elect of the State Auxiliary, spoke to the women on "The Importance of Being a Doctor's Wife in a Complicated Society."

Other speakers were: Dr. Henry J. Lehnhoff, Jr., Omaha, "Hepatitis;" Dr. Philip Redgwick, Omaha, "The Causes of Abortion and Its Care."

Dr. Howard Hunt and Dr. Ralph Moore, both of Omaha, were the speakers at a meeting of the Tri-County Medical Society last night at Riverside golf club in Grand Island.

Dr. Hunt discussed radiological treatment of thyrotoxocosis and Dr. Moore talked on the treatment of atom bomb injuries. About 60 persons attended the meeting.

The Madison Six County Medical society held a dinner meeting at 7 o'clock Thursday evening, Dec. 7, at Hotel Madison. Dr. Payson Adams, Omaha, spoke on "The Prostate Problem in General With Particular Reference to Retropubic Prostatectomy."

Dr. Fred Good, Denver surgeon, and Dr. Stanley Kurland, Denver pathologist, were guest speakers at the meeting of the Tri-County Medical Association at the Country Club Wednesday evening, Nov. 15. Dr. and Mrs. C. H. Babbitt were hosts, and other guests were Dr. and Mrs. B. H. Grimm, Dr. and Mrs. C. B. Dorwart, Dr. and Mrs. Jason Roche, Dr. and Mrs. Hull Cook and Dr. and Mrs. Chris Bitner, all of Sidney, Dr. and Mrs. J. B. Pankau of Dalton, Dr. and Mrs. H. R. Baker of Chappell and Dr. and Mrs. Al Shamberg of Kimball. A dinner of attractive appointments was served at the Country Club and the Doctors' wives remained at the club for an evening of social diversion while the Doctors' business session was held at the Babbit home.

Dr. Paul Bancroft of Lincoln was the speaker Monday evening, Nov. 27, at a meeting of the Tri-County Medical Society and its auxiliary at the Fremont Golf club.

Doctor Bancroft's talk on the subject "Growth and Development of Children" followed the 6:30 dinner meeting.

According to the proponents of compulsory government health insurance, the American people just can't protect themselves against the exigencies of illness.

However, judging by their actions, the American people don't agree with that view. According to the Health Insurance Council, they gained millions of new subscribers—all of whom bought the service because they wanted it, not because the government told them they had to—in 1949. In that single year, hospital expense insurance increased its coverage from about 61,000,000 people to more than 66,000,000—and only 10 years before it covered but 5,670,000. A relatively new form of protection that pays benefits for medical expenses other than surgery was owned by 12,895,000 people at the end of 1948 and by 16,862,000 at the end of 1949, a huge gain of 31 percent in twelve brief months. Other types of insurance also showed healthy jumps.

This certainly doesn't look as if we as a people, are incapable of doing something about the sickness problem. These plans are inexpensive—a few dollars a month gives the basic protection to a worker and his family. Their benefits have been broadened. And they don't require billions of dollars of tax money for support!!

—From Hartington News.

HUMAN INTEREST TALES

Communications bearing human appeal are solicited. They should be addressed to The Editor, Nebraska State Medical Journal, 111 So. 39th, Omaha.

Dr. Sanford Rathbun addressed the St. Joseph's Parent-Teacher Association at Beatrice, Dec. 6.

Dr. L. D. McGuire was elected president-elect of the Omaha-Douglas County Medical Society in December.

Dr. Robert Geer addressed the American Association of University Women in Grand Island in November.

Dr. Raymond McCoy of Tecumseh discussed the treatment of cancer before the local women's club in November.

Dr. W. W. Arrasmith of Alliance was recently appointed medical examiner for the Civil Aeronautics Administration.

Dr. Fay Smith of Imperial attended the International Post Graduate Medical Assembly in Chicago in November.

Dr. Wayne Brewster of Holdrege attended the meeting of the International College of Surgeons in Cleveland in November.

Dr. Roland Loder was elected president of the Nebraska Public Health Association at its meeting in Lincoln in November.

Dr. Roland F. Mueller of Lincoln attended the seventh Inter-American Congress of Surgery in November at Lima, Peru.

Dr. and Mrs. Herman Johnson of Omaha recently visited their daughter and son-in-law Dr. and Mrs. Thomas Hood at Rochester, Minn.

Dr. J. D. Reid of Pilger addressed the local Woman's Club early in December under the title "A Doctor Looks at Life and What Does He See."

Dr. R. Russell Best of Omaha attended a meeting of the Society of U. S. Medical Consultants in World War II, on November 13, in Washington, D.C.

After being without a doctor for four years Big Springs, Nebraska, has acquired a physician. He is Dr. Robert Nisley, a recent graduate of the University of Nebraska.

Dr. Wm. M. Fitch is the new doctor at Cairo. Graduate of the University of Nebraska College of Medicine Dr. Fitch practiced in Grand Island prior to his present location.

It is reported that Dr. LaVerne F. Pfeifer of Lincoln, a Lieutenant (jg) in the Navy has had a rough time in the fighting in Korea. Dr. Pfeifer has been on active duty since August 25, 1950.

A new addition to the Grand Island Clinic is Dr. G. W. Graupner, formerly of Chicago. Dr. Graupner is a graduate of the University of Illinois College of Medicine, a veteran of World War II.

Dr. Ralph O. Ruch of Omaha was guest speaker before the Cass County Medical Society and Auxiliary at its meeting November 13, in Atlantic, Iowa. His subject was "Dermatology in General Practice."

Dean Harold C. Lueth of the University of Nebraska Medical college addressed the Nebraska Hospital association on some of the problems in civilian defense. The association met in Lincoln the middle of November.

Among those who presented papers before the Western Surgical Society at Minneapolis early in December are Drs. H. H. Davis, George Pester, Walter Stager, R. R. Best, John D. Coe and George B. McMurtrey.

Dr. W. S. Petty who has been with the Nebraska State Health Department since 1942 has joined the Missouri Division of Health where he will supervise the public health work of 15 counties with headquarters in Macon, Mo.

RICKETS THAT RESIST VITAMIN D

Many children are suffering from rickets that are resistant to moderate doses of vitamin D, according to Dr. John F. Holt of the Department of Roentgenology of the University of Michigan. (The American Journal of Roentgenology and Radium Therapy, October, 1950).

This type is different from ordinary rickets, he says, because it takes spectacularly large doses, ranging from 50,000 to 1,000,000 units per day, to effect a cure.

The refractory variety has assumed increasingly greater importance in the United States, Doctor Holt writes. He adds that "undoubtedly many examples of the disease remain unrecognized."

Why the intestinal tract does not absorb what would ordinarily be ample amounts of vitamin D in these cases is unknown.

"The relatively frequent occurrence of the disease in several members of a family indicates that the peculiarity is a hereditary one," Doctor Holt states. In refractory rickets the disease shows up in early childhood and continues sometimes until the child is 12 years old.

Rickets exist in all parts of the world but particularly among the poor of the larger cities, who are badly housed, ill fed and who get little sunshine. It is most prevalent among Negro and Italian children. Rickets increases in the autumn and through the winter, reaching its maximum in March.

In rickets the child first complains of soreness and cries when an attempt is made to move him. Gradually the tissues become soft and flabby; the skin is pale, and from a healthy, plump condition the child becomes puny and feeble. Muscular weakness may be marked, particularly in the legs, and paralysis may be suspected. The bones eventually show the most important changes, particularly the ends of the long bones and the ribs.

Doctor Holt warned his x-ray colleagues of certain pitfalls in making a diagnosis. An x-ray diagnosis is often made, he said, but added that it "may be retracted when it is learned that the patient had had adequate vitamin D intake with failure to effect a cure."

Doctor Holt cites the case of a five year old girl, who underwent ordinary vitamin treatment for bowlegs, which had been getting progressively worse. It was found that 50,000 units and then 100,000 units of vitamin D were insufficient to heal the patient's rickets. Then she was placed on 500,000 units per day.

"During the ensuing 17 months, patient's rickets healed completely only to recur when the dosage of vitamin D was moderately reduced. When the vitamin D intake was again increased, the rickets responded once more."

The Nebraska State Medical Journal

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

Vol. 36 Norfolk, Nebraska, February, 1951 No. 2

EDITORIAL

MEDICAL EDUCATION IN NEBRASKA AT THE CROSSROADS

At the risk of appearing repetitious we again solicit the attenion of the people of Nebraska generally and of the members of the medical profession in particular, to the urgent needs for improvement in our facilities for medical education. On another page in this issue is the abstract of a letter sent to the members of the College of Medicine of the University of Nebraska Alumni Association, by its President, Dr. Eugene E. Simmons. Creighton University School of Medicine periodically is sending pleas to its graduates for active support of the institution. To keep pace with mounting costs and modern equipment essential to good undergraduate and post-graduate teaching in its various laboratory and clinical departments, budgetary demands have grown by leaps and bounds. And from present indications no one can predict the end of these constant rises in costs.

If there is a feeling of difference among the alumni of our two medical schools we are not aware of it. It is understandable, and to a certain degree desirable that one preserve a loyalty to his own alma mater. However, no physician in full honesty and devotion to his calling can afford the luxury of indifference or disinterest in either institution when both are literally struggling for survival. The medical profession cannot thrive on academic partisanship. We are all doctors, possessed with a keen desire to maintain and steadily improve standards of medical education. We owe this to ourselves and the people of this state. The better medical schools we have the greater will be our opportunities to keep in step with newer concepts and newer techniques in diagnosis and therapy to be applied in the care of our patients. Creighton or Nebraska, both medical schools aim toward a common goal — to maintain good educational standards as the only means to train good doctors, and in whatever way possible to contribute their share toward the advances in the arts and sciences of medicine.

In the pursuit of these aims they must have the undivided support of every member of the medical profession. Every physician can, and should be helpful by impressing his patients and his friends with the important role the two medical schools play in the economy of our Commonwealth. Only through such genuine effort will our medical schools be able to retain their dignified place among similar institutions in this country.

At this writing medical education stands at the Crossroads.

HELP YOUR PATIENTS THROUGH BLUE CROSS-BLUE SHIELD

Members of the Association recently were requested to help popularize Blue Cross-Blue Shield by inserting in the monthly statement a double postal card one side of which is addressed to Blue Cross-Blue Shield, soliciting information on the insurance plan. Aside from constituting an act of good public relations, this will at the same time prove most helpful to the patient and his family. We need not dwell here on the expenses of hospital care. They are well known to every practicing physician. The fact is that no wage-earner or small business man today can afford the risk of not being insured against sickness. In the event of serious illness unless coverage is provided, not only the current budget but on occasion a life-time of savings may be threatened, or prolonged indebtedness incurred. With our modern concept of psychosomatic philosophy the doctor must indeed consider it a professional obligation to acquaint his patients with the necessity for protection of himself and his family against the contingency of sickness.

There is also the element of support for Blue Cross and Blue Shield. These two agencies have established themselves on sound insurance principles and they have provided low cost coverage to thousands of our citizens in the state.

Country-wide they stand with pride and vigor as the most reasonable and the most potent argument against federal control of medicine. But they must keep up in their further growth and development. This can be accomplished in only one way — by a constant flow of new contract holders. Blue Cross and Blue Shield have enjoyed phenomenal success. Whether this rapid rate of growth will remain continuous will depend upon the people who receive the benefits of this non-profit institution. Through the active and sustained encouragement of the physicians in Nebraska this voluntary plan has unlimited prospects for even greater and better service.

We urge every physician to do his part.

CARDIO-VASCULAR DISEASE

Thus far few of the fundamental problems of cardio-vascular disease have been solved. This field remains virgin for the oncoming generations of students in medicine and its related branches. The situation in rheumatic heart disease has been somewhat improved by better living conditions but little if any, by any specific remedies. Possibly substances such as ACTH and Cortisone during the attacks of acute rheumatic fever may some day alter the incidence of valvular heart diseases. Except for this ray of hope no important contributions have yet been made for the treatment of rheumatic heart disease. Syphilitic heart disease, formerly an important factor in cardio-vascular disease has been largely eliminated by better treatment of the underlying disease. Thyroid heart disease has been cured by surgery, and in time probably will also respond to other forms of effective therapy.

Cardio-vascular surgery has been most spectacular with encouraging contributions. A patent ductus arteriosis is now relatively simple to cure. The correction of a co-arctation of the aorta still requires most highly skilled surgeons, assisted by expertly trained operating teams. Some forms of cardiac surgery, as for the relief of pulmonary stenosis substitute only one defect for another. In other words, the present status is only high class patch work. The chief problem, surgical correction of acquired valvular defects as mitral stenosis and regurgitation and aortic regurgitation and stenosis, are at this time only a surgical challenge.

The field of arteriosclerosis is being explored by many competent investigators. Some important leads in regard to cholesterol and related compounds seem promising, however up to the present the chief investigations have been on animals, principally the rabbit, the dog, and the chicken. No important contributions to the etiology, course, or prevention of arteriosclerosis in the human being have thus far been made. Some interesting observations have been made in regard to phospholipids, especially by Gofman.

The problem of hypertension likewise remains unsolved. Observations such as made by Goldblatt are interesting, but they do not solve the basic issue. The end result is the same whether a clamp is applied about the renal artery as done by Goldblatt, or when the clamp is applied by nature in arteriosclerosis around the arterioles of the kidneys. There seems to be some evidence that the initiation of the peripheral resistance is due to a hormone. It may be a bit overly optimistic to suppose that this problem may be solved by isolating a hormone, as in the case of hyperthyroidism.

However one important contribution has been made in regard to hypertension. This lies in the recognition that many cases of moderate hypertension in the group above sixty years of age is not very harmful, and usually does not require treatment.

Another concept which may be helpful is that hypertension and arteriosclerosis are not necessarily related diseases. They both have different origins, and the only relation between the two is that hypertension accelerates the arteriosclerotic process, in a manner similar to diabetes. Inasmuch as the death rate from cardio-vascular diseases is greater than all other diseases combined, it is evident that these present one of the most important perplexities of medicine today, especially since the number of people living after sixty-five years of age is constantly increasing. It is obvious that some of these cardio-vascular deaths are simply the result of the ageing process. How much can be done to modify or procrastinate the onset and slowing down its progress remains for time to record.*

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*At the request of the Journal this editorial was prepared by F. W. Niehaus, M.D., Chairman, Cardio-Vascular Committee.

Chronic Cor Pulmonale

ADOLPH SACHS, M.D., F.A.C.P.; WILLIAM J. REEDY, M.D.,
and JOHN R. WALSH, M.D.
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The custom of labeling all cases of non-valvular heart disease as arteriosclerotic heart disease in patients in whom systemic hypertension does not exist is extremely common. This is particularly true in the older age groups where arteriosclerosis is a common finding. Attention is focused in particular on patients of the older age group in whom angina is absent and a diagnosis is made by the method of exclusion. These individuals present themselves to the physician with the clinical picture of congestive heart failure, and on examination the blood pressure is found to be normal and there are no gross cardiac findings. Before diagnosing all cases of this nature as arteriosclerotic heart disease awareness of other clinical entities may decide in favor of another etiological agent as the cause of the heart failure. One possibility about which we are particularly concerned and which is not a rare one if kept in mind is chronic cor pulmonale or pulmonary heart disease. This entity is often mislabeled arteriosclerotic heart disease. A diagnosis is not easily made because both types of heart disease occur in the same age group and both can occur in the same patient. This is to be expected since emphysema, the most common pulmonary condition leading to heart disease, is a common disease and often occurs in patients with heart disease from other causes. There are, however, certain requisites which when present make a diagnosis of cor pulmonale tenable. The most important point in the diagnosis is to keep chronic cor pulmonale in mind as a possibility in all cases, and once considered the appropriate x-ray, electrocardiograph and laboratory work may give confirmative information.

The following case reports will serve to emphasize the many diagnostic problems which the practitioner faces in some borderline cases, and the compartive ease of diagnosis in the more classical case. A point of particular signficance is that all our cases have been in males. In reading over the case histories presented it is also apparent that the diagnosis was made in all cases only after heart failure was clinically evident. In fact a diagnosis of chronic cor pulmonale in the absence of congestive heart failure is only an assumption.

Since the therapeutic regime for heart failure is the same in general whether it be chronic cor pulmonale or arteriosclerotic heart disease the question may arise as to what practical benefit is derived from distinguishing these two entities. The answer is entirely one of prognosis because chronic cor pulmonale may respond poorly to treatment. Eighty-six per cent of Scott and Garvin's series(1), i.e. 43 of 50 patients, died of the first attack of cardiac failure which substantiates this claim. There are many residual symptoms after the heart compensates which are due to the underlying pulmonary pathology. We cannot tell these people that their shortness of breath will decrease after the heart improves nor that their cyanosis will entirely disappear. Their exercise tolerance is diminished due to pulmonary dyspnea. Treatment in this disease is modified to include the respiratory as well as the circulatory system. The short duration and progressive nature of symptoms in these cases of right heart failure limits any hopeful outlook for return to full activity.

INCIDENCE

The recognition of the possibility of chronic cor pulmonale in all cases of non-valvular heart disease is undoubtedly reflected in the incidence of the disease. Geographical areas in which the diagnosis is prominently considered have a higher incidence. But there are other variables which have an important bearing, namely, poor statistics, poor standardization of criteria for diagnosis as well as the natural pitfalls in the diagnosis of the disease. Racial predominance may be a factor that accounts for disagreement of statistics in the literature. According to Scott and Garvin(1) the disease is of more common occurrence among immigrants from Southeastern Europe, many of whom migrated to Cleveland where their report originated. According to White(2), the incidence varies from 0.9 per cent to 6.8 per cent.

The influence of sex is strongly exhibited in the literature. The overwhelming majority of cases in males is striking. Spain and

Handler(3) record four women in a series of 60 cases. Scott and Garvin(1) have two women in a report of 50 cases. The disease according to the former authors favors those engaged in hard labor, particularly in those in which emphysema is the prominent factor. The majority of cases are discovered in patients over 50 years of age although it can occur in middle age groups.

ETIOLOGY

As implied by its terminology chronic cor pulmonale or pulmonary heart disease is secondary to a chronic pulmonary disturbance. The latter occasions right ventricular hypertrophy or strain and eventually cardiac failure. The chronic pulmonary diseases inducing the chain of activity eventuating in right ventricular strain are chiefly, emphysema, asthma, pulmonary tuberculosis, pneumoconiosis, bronchiectasis, kyphoscoliosis, and diseases of the pulmonary arteries.

Outstanding as a cause of chronic cor pulmonale is emphysema, so much so, that the designation emphysema heart disease is used synonymously. It should be stated clearly that when speaking of emphysema we specifically mean obstructive emphysema and particularly chronic hypertrophic emphysema such as is found in long standing cases of bronchitis, bronchial asthma, or both. Senile or postural emphysema is not to be considered a cause of pulmonary heart disease(4). It is not a primary pulmonary disorder but rather secondary to a degenerative process in the spine. This fact is of great importance since senile emphysema is rather common and occurs in the age group in which heart disease is prevalent. A diagnosis of pulmonary heart disease indiscriminately in these cases would result in a preponderance of wrong diagnosis in favor of pulmonary heart disease.

Cor pulmonale due to chronic bronchial asthma and its sequelae, bronchiectasis and emphysema, is a more frequent condition than is generaly believed according to Schiller et al(5). These authors submit clinical and autopsy evidence showing that the longer the asthma the greater the strain on the right ventricle. Bronchial asthma and emphysema are closely akin so that they may be considered together. That bronchial asthma and emphysema may lead to pulmonary hypertension and subsequent right heart strain and cardiac failure is generally accepted but the pathogenesis is a matter of controversy in the literature(3, 6).

Of great significance in industrial medicine is pneumoconiosis. Soggin et al(7) in their study of the heart in this disease reveal secondary heart involvement to be more common than realized. In fact they state that more patients died from congestive heart failure than from tuberculosis. The latter disease was formerly regarded as the cause of death. In autopsied cases right ventricular enlargement or enlargement of both ventricles was found in most fatal cases of pneumoconiosis.

A rare but interesting form of heart disease is that due to thoracic and spinal deformities and it is sometimes referred to as kyphoscoliotic heart disease. According to Chapman, Dill and Graybill(8) deformities of the chest are due to poliomyelitis, congenital or herditary defects, rickets, tuberculosis and, to add another cause as illustrated in our cases, residual effects of empyema. These authors state that the incidence of right sided kyphoscoliosis is greater than left. Once symptoms of heart failure intervene death occurs in a short interval. Death usually occurs before the age of 30 years. Mendelson(9) stresses the danger of pregnancy in women with kyphoscoliosis.

CLINICAL PICTURE

A diagnosis of chronic cor pulmonale cannot be made in the absence of cardiac failure(2, 10). The diagnosis may be considered in chronic pulmonary conditions but heart involvement cannot be detected until signs and symptoms of heart failure appear.

Many of the symptoms and findings in chronic cor pulmonale are common to both pulmonary disease and cardiac failure, a circumstance which always makes the diagnosis difficult. A person presenting for the first time symptoms attributed to heart failure is likely to be wrongly diagnosed as having cardiac disease because the history of dyspnea, cough, expectoration, cyanosis and edema are considered primarily cardiac in origin. And yet these findings may be purely on a pulmonary basis although they can be intensified by the onset of cardiac failure. Of interest in this respect is the report of Kountz et al(11) who showed that emphysema may simulate cardiac decompensation. He explained dyspnea and cyanosis in emphysema on pulmonary dynamics, and edema which may occur in the absence of heart failure, on increased peripheral venous pressure and anoxemia.

The transition from the pulmonary phase

to the stage of cardiac involvement is often undetected because the same symptoms are common to both. These borderline cases present special problems and therapeutic tests with digitalis must be employed occasionally to determine if heart failure is concealed by the pulmonary disease.

Findings of the pulmonary phase of the disease such as cyanosis, clubbing of the fingers, polycythemia, dyspnea and cough may be present for a long time prior to the onset of findings indicative of cardiac disease. The lung findings depend on the type of lung pathology present.

Cyanosis and clubbing of the fingers are not always present. Polycythemia is not a consistent finding and its presence is not necessary for the diagnosis. In Scott and Garvin's(1) series the red cell count was over 5,000,000 in 21 of 32 cases. On the other hand Coggin et al(7) in their report on pneumoconiosis state that none of their cases showed an increase in red cells and in fact some patients had anemia.

The cardiac stage is usually due to involvement of the right ventricle which subsequently fails and is noted clinically by engorgement of the cervical veins, enlargement of liver, edema and possibly ascites. The blood pressure is usually within the normal range. The pulmonic second sound is accentuated indicating pulmonary hypertension. An increase in dyspnea over that previously found is suggestive of a cardiac complication and orthopnea usually indicates embarrassment of the heart.

The cardiac rhythm tends to be normal throughout the course of the disease. Occasionally auricular fibrillation is found. Coggin(7) reports six instances of the latter in cases in which cor pulmonale was the only heart disease present.

Since most patients are seen in the stage of cardiac failure and are not followed through the pulmonary stage to the cardiac stage, the course of events must be traced from the history and correlated with physical findings. A complete investigation should be made to determine if the heart failure is due to pulmonary disease. Of value in this determination is the history, especially if the patient is seen after recurrent bouts of failure. A history of residual dyspnea after having been freed of edema with a diuretic regime is typical and implies underlying pulmonary pathology, usually emphysema. Residual cyanosis after the heart compensates suggests pulmonary disease. Therefore from the history or from the patient's progress while recovering from cardiac failure a clinical or bedside diagnosis can be made.

Measurements of vital capacity and venous pressures are used at times as supportive evidence of cardiac failure. But Kountz et al(6) state that lowered vital capacity and elevated venous pressures are mutual signs of emphysema and heart failure and therefore fail to differentiate the two conditions.

Durant(12) emphasizes a well known fact that if it is possible to measure the pressure in the pulmonary circulation the problem of pulmonary heart disease becomes simpler. He stresses the clinical method of measurement of pulmonary hypertension, the accentuated second pulmonic sound of sharp quality, as being pathognomonic. The often found loud second pulmonic sound which is not sharp may be an entirely normal finding. A complete appraisal of the cardiac status is essential before attributing significance to this finding because left ventricular failure can cause pulmonary hypertension and give the identical accenuated second pulmonic sound.

X-RAY FINDINGS

Roentgenograms may be of great assistance in determining right ventricular enlargement, verifying cor pulmonale. On the other hand it is usually difficult to detect slight enlargement of the right ventricle. Roentgenograms in a good percentage of cases may show a normal cardiac configuration plus the primary pulmonary pathology. Cardiac size is very difficult to evaluate in cases of emphysema because of over-expansion of the lungs. Sagittal views for right ventricular measurment would be of no value for the same reason. The heart is usually vertical and small due to depression of the diaphragm and greater volume of the lungs. According to Coggin and his associates(7) similar arguments apply in heart involvement secondary to pneumoconiosis.

Demonstration of a prominent pulmonary conus is further support in favor of cor pulmonale. Anterior oblique views with oral barium may be made to rule out a dilated left auricle due to mitral stensosis.

Prominent pulmonary vascular markings are good evidence of cardiac involvement in emphysmea but according to Coggin et al(7) they are of no worth in pneumoconiosis because of confusing shadows of the disease.

ELECTROCARDIOGRAPHIC FINDINGS

Although the electrocardiographic findings may be normal[1 3 6 7] the finding of right axis deviation lends greater emphasis to the diagnosis. According to Katz(13) the electrocardiographic findings of right heart strain with a P-"pulmonale" pattern is characteristic of chronic cor pulmonale. The P wave pattern or the P-"pulmonale" pattern is described as follows: a small P in lead I, tall peaked and unnotched P waves in lead II and III and inverted P in the chest leads. These findings are often associated with low voltage of QRS complex in the limb leads when emphysema is responsible for chronic cor pulmonale.

Changes in the chest leads include high R with negative T waves in leads over the right precordium.

TREATMENT

The treatment of cardiac failure due to pulmonary disease is similar to the treatment of cardiac failure due to any other type of heart disease. Bed rest, low sodium·cardiac diet, diuretics and digitalis are used in the usual manner. In addition to the treatment of the cardiac phase it is important to treat the pumonary disease vigorously. The chief remedial measure in all forms of pulmonary disease is oxygen. Special efforts should be taken to relieve seizures of persistent coughing which imposes added strain on a heart already embarrassed.

It must be realized that any beneficial effect on the pulmonary phase of the disease is usually temporary lasting only while the patient is at bed rest and activity is restricted. The pulmonary disease is usually a chronic incurable disorder and is irreversible. And yet, we should not despair for a great deal can be offered some patients. Avoidance of additional strain on a pulmonary system already overtaxed, is accomplished by an effort to control acute respiratory infections. Antibiotic therapy may be of value in these cases and may even be a life saving procedure. In numerous instances it is a superimposed acute illness, such as pneumonia, on the chronic lung disease which precipitates heart failure. Patients should be forewarned against high altitudes. Counsel on matters of living in a dry warm climate, avoiding strenuous effort and avoiding fatigue should be stressed.

In cases of pulmonary disease it is sometimes difficult to decide whether heart failure of a mild degree is a complicating factor. According to White(2) a therapeutic test with digitalis is justified in these cases. If signs respond favorably there is further testimony that chronic cor pulmonale or some other complicating heart disease is present.

Once heart failure has occurred the clinical course is progressively downhill and the prognosis is poor in most cases. As stated earlier in Scott and Garvin's series, 86 per cent died in the first attack of failure. Coggin et al(7) are of similar opinion in their treatise on the effect of pneumoconiosis on the heart and add that most of their patients died within a few months after the onset of failure. And yet there are many patients who respond well to the therapy for congestive failure with restoration to an active life. They are limited by the physical incapacitation of the underlying pulmonary disease.

CASE REPORTS

Case 1. Emphysema heart disease: Mr. C. W. aged 69 years, was admitted to the hospital May 26, 1949, because of dyspnea and orthopnea of five days duration. The patient first experienced dyspnea and orthopnea in 1941. Two years later he again experienced several attacks of shortness of breath and edema which responded to treatment. He had a morning cough for years with thick blood tinged sputum. The patient had a known allergy to feathers and had hay fever. The past history revealed he had whooping cough during childhood.

Physical examination revealed orthopnea with cyanosis of ears, face, lips and extremities. He had an emphysematous type chest, with hyperresonance, decreased breath sounds, and crepitant rales over the entire chest. There was an apical systolic murmur with cardiac enlargement to the left. The second pulmonic sound was accentuated and sharp. The blood pressure was 120 mm. Hg. systolic and 70 diastolic. There was bilateral pitting edema of legs, cyanosis, and marked clubbing of fingers.

Laboratory: RBC 7 million cells, Hglb 17 gms. Urine negative. NPN 54 mg. per cent. EKG exhibited a P-"pulmonale" pattern. See Figure 1A. A teleroentgenogram of the chest showed a prominent pulmonary conus with increased pulmonary vascular markings and flattening of the left diaphragm.

Case 2. Kyphoscoliotic heart disease: Mr. S. P., aged 35 years, was admitted September 9, 1948, with a history of paroxysmal nocturnal dyspnea and orthopnea for the past 30 years. These complaints have become progressively worse over the past five months.

He stated that at the age of four years he suffered pneumonia and empyema on the right side which was drained surgically. Following this the patient developed a deformity of the chest.

Physical examination revealed a marked deformity of the right chest. The trachea deviated to the left. There was a marked kyphoscoliosis of the spine with curvature to the left and a marked deformity of the bony thorax with compression and concavity of the right side. The left thorax appeared emphysematous. The right lung was dull on percussion and breath sounds were absent. The left lung was hyperresonant with diminished breath sounds and crepitant rales over the posterior lower lobe. The heart was regular, the maximum apex impulse was displaced to the left in the sixth interspace. There were no murmurs. The blood pressure was 148 mm. Hg. systolic and 92 mm. Hg. diastolic. There was a large non-tender, firm, fixed mass in the right lower abdomen.

The pertinent laboratory data presented Hglb 14.5 gm., RBC 4.9 million, and WBC 7,800 with a normal distribution. Urine negative. X-ray findings are illustrated in Figure 2.

Following a surgical exploration of the abdomen the patient developed a pneumonic process in the right lung and subsequently involvement of the left lower lobe. The pneumonic process gradually improved in response to intensive antibiotic therapy. During the course of pneumonia he developed dependent edema, depressed urinary output, gallop rhythm and dyspnea associated with non-protein nitrogen retention. Digitalization was attempted but patient failed to respond and expired on December 6, 1949.

Autopsy disclosed almost complete obliteration of the right pleural cavity and a compressed atelectatic right lung weighing 100 gm. Red consolidation of the basal portion of the left lung was found. The heart weighed 700 gm. The right auricular and ventricular musculature was dilated and hypertrophied beyond normal. The left ventricle was also dilated and hypertrophied.

Case 3. Emphysema heart disease: Mr. P. W. L., aged 59 years, was admitted to the hospital on January 26, 1949, complaining of shortness of breath and swelling of legs. He stated that he first experienced shortness of breath 12 years ago following "flu" infection. Swelling of his legs has been present over the past year. He has had a cough for years with a large amount of frothy sputum. Three years ago the patient was given digitalis for similar complaints.

Physical examination revealed cyanosis of the lips and fingers. There was an emphysematous type chest, decreased chest excursion, diminished breath sounds over both lower lobes, hyperresonance, and moist rales throughout the entire lung fields. The blood pressure was 120 mm. Hg. systolic and 60 mm. Hg. diastolic. The heart rate was 140 per minute and regular. There were no murmurs. There was marked pitting edema of legs.

The laboratory studies showed urine negative, RBC 4.8 million, Hglb 15 gm. NPN 39 mg. per cent. Repeated sputum examinations were negative for acid fast bacilli. X-ray findings are illustrated in Figure 3.

An electrocardiogram exhibited a P-"pulmonale" pattern (see Figure 1B).

Case 4. Pulmonary fibrosis with secondary emphysema: Mr. C. B., aged 58 years, was admitted to the hospital on July 15, 1947, because of a continuous cough productive of thick whitish material and edema of his ankles of an indefinite duration. He stated that he had pneumonia six weeks previously from which he recovered. Physical examination revealed a kyphosis and a scoliosis to the left. The left thorax was decreased in size. There was hyperresonance over the right thorax and crackling rales at left lung base. The heart was regular at 120 beats per minute, no murmurs, and was not enlarged. The liver was enlarged two finger breadths below the costal margin. There was pitting edema of both ankles.

Laboratory studies showed Hglb 11 gm., RBC 3.7 million, WBC 14,900 with an essentially normal distribution. Urine negative. Multiple sputum examination were negative for acid fast bacilli. Cultures for fungi were negative. The electrocardiogram interpretation was right axis deviation.

Teleroentgenograms of the chest showed infiltration throughout much of the left lung with evidence of considerable old fibrosis in the left upper lobe with a shift of the mediastinum to the left. The right lung was clear.

Case 5. Bullous emphysema, bronchiectasis: Mr. F. M., aged 46 years, was admitted to the hospital on July 16, 1947, because of shortness of breath for the past two years. In 1943 he first developed attacks of asthma. Over the past two years, he has experienced acute attacks of dyspnea precipitated

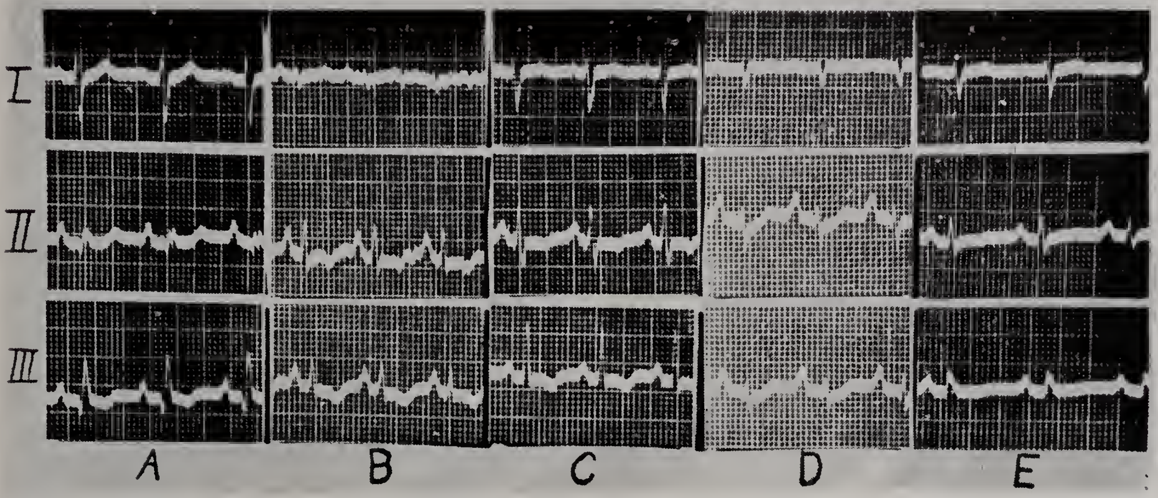

Fig. 1. Electrocardiograms showing right ventricular hypertrophy and small P wave in lead I with tall, peaked, unnotched P waves in leads II and III ($p_1P_2P_3$) characteristic of P—"pulmonale" pattern. The P waves are of normal duration.

by excitement and over-activity. In January, 1947, he was given digitalis and told that he had "heart trouble." As a child he states that he had pneumonia and empyema and was treated by surgical drainage.

The pertinent physical findings were two old healed scars on the left lateral thorax at the level of the sixth and eighth intercostal areas. There were musical rales throughout the chest and some crepitant rales at both bases. The heart was enlarged 2 cm. to the left, the rate was 112 per minute and regular. There were no murmurs. The blood pressure was 100 mm. Hg. systolic and 70 mm. Hg. diastolic. The liver was three finger breadths below the costal margin. There was marked cyanosis of the feet.

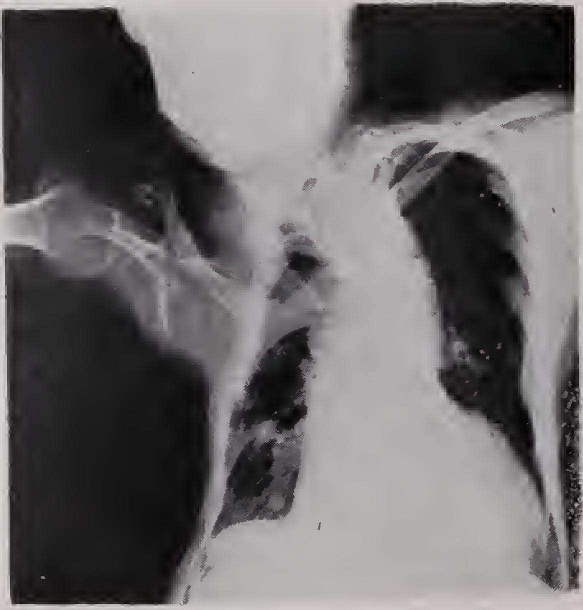

Fig. 2—Case 2. Roentgenogram of chest showing marked deformity of the bony thorax with evidence of pulmonary emphysema.

The laboratory data demonstrated Hglb 15 gm., RBC 5.3 million, WBC 14,000 with 86 percent neutrophiles. Urine negative. Sputum examinations were negative for acid fact bacilli. The sputum volume varied between 90 to 110 cc. and exhibited three distinct layers. X-ray findings are illustrated in Figure 4.

The electrocardiogram showed a right ventricular hypertrophy. See Figure 1C.

Case 6. Emphysema heart disease, cardiac failure precipitated by pneumonia: Mr. F. H., a 68 year old white man, admitted October 1, 1947, complained of dyspnea since the previous summer which became worse three weeks after the onset of cough and bloody sputum. Three days prior to admission he became extremely dyspneic and orthopneic and experienced swelling of his legs. The patient had some chills and fever during this present illness. He stated that he had frequent colds over the past fifteen years.

Physical examination revealed an orthopneic patient with cyanosis of the lips and rapid respirations. The heart rate was 130 per minute and regular. The apex beat was found lateral to the midclavicular line. There were no murmurs. The thorax was fixed and there was marked retraction of the intercostal spaces. Hyperresonance with dullness at both bases posteriorly were found. The liver was enlarged three finger breadths below the costal margin. There was clubbing of the fingers and bilateral pitting edema of the legs. The temperature was 101.2° F.

Laboratory: Hglb 11 gm., RBC 4.0 million, WBC 23,000 with 88 per cent neutrophiles. Urine negative. Repeated sputum examinations were negative for acid fast bacilli.

A portable x-ray of the chest exhibited patchy infiltration in the right lower lobe and to a lesser extent in the left lower lobe and increased hilar and perihilar shadows on the left. A teleroentgenogram three weeks following admission showed almost complete resolution of the pulmonary infiltration. The pulmonary conus was prominent and there were increased hilar markings.

The electrocariographic data revealed a left axis deviation and evidence of myocardial damage.

Case 7. Chronic pulmonary fibrosis with atelectasis: Mr. C. H., aged 57 years, was admitted to the hospital December 29, 1947, with a history of frequent colds and attacks of labored wheezing respirations with expectoration of large amounts of thick yellowish sputum for the past 17 years. During the past four years he had occasional hemoptysis and dyspnea on exertion. For three weeks prior to admission he suffered marked shortness of breath and a smothering sensation. He gave no history of dependent edema at any time. Past illnesses included whooping cough during childhood and lobar pneumonia in 1946.

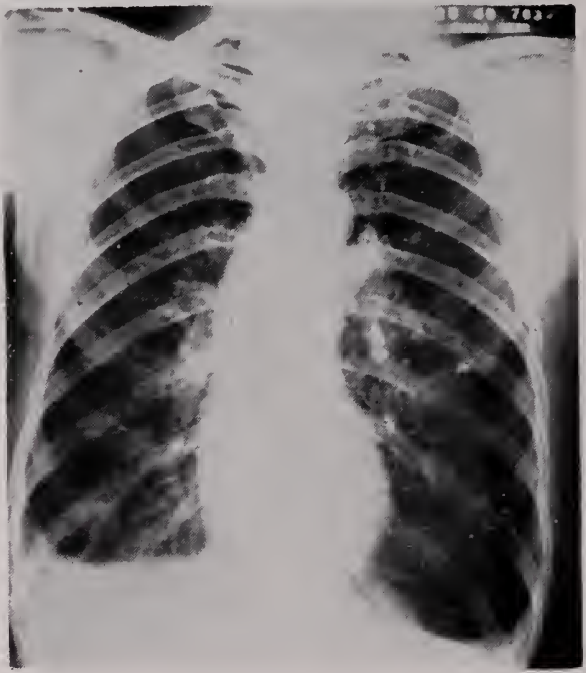

Fig. 3—Case 3. Teleroentgenogram of chest demonstrating emphysema and fibrotic and calcified infiltration in the left upper lobe.

Physical examination revealed auricular fibrillation with a 110 to 120 per minute rate. The apex impulse was shifted to the left and no murmurs were heard. The blood pressure was 120 mm. Hg. systolic and 84 mm. Hg. diastolic. The trachea deviated to the left. There was retraction of intercostal spaces with atrophy and flattening of the left side. There was limited expansion and dullness of the left chest with decreased breath sounds. Coarse moist rales were evidenced throughout both lung fields.

Laboratory: Hglb 13 gm., RBC 4.5 million, WBC 7,300 with 84 per cent neutrophiles. A faint trace of albumin was found on urinalysis. Repeated sputum examinations were negative for acid fast bacilli.

The chest x-ray demonstrated the left lung field to be opaque with a marked shift of the mediastinal contents to the left. There was some infiltration in the right base extending outward into the middle and upper portions. Bronchograms showed partial filling of the left lower lobe but no evidence of bronchial or alveolar structures. The upper left lobe appeared atelectatic and retracted into the superior and medial portion of the thorax.

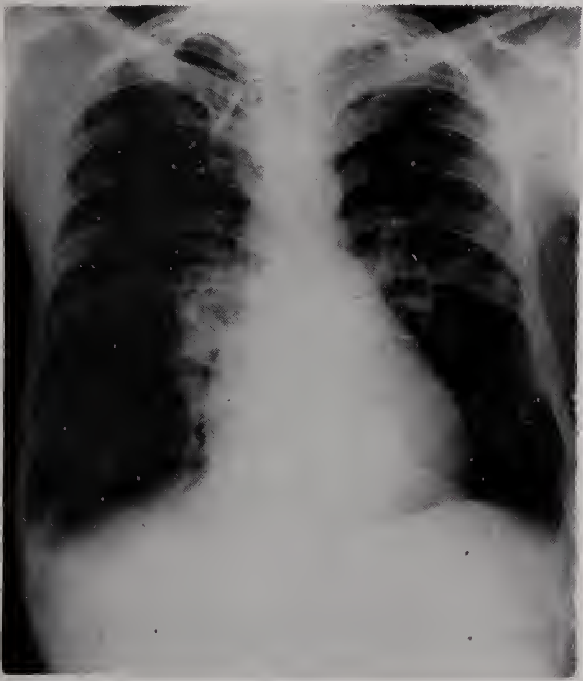

Fig. 4—Case 5. Roentgenogram of chest showing prominent pulmonary conus and increased hilar markings throughout the right lung and upper portion of the left lung. There is an 8 by 9 cm. area of bullous emphysema in the left lower lung field.

The electrocardiographic tracing interpretation was right axis deviation, auricular fibrillation and myocardial damage.

Exploratory bronchoscopy revealed thick purulent secretions filling the left main bronchus but no evidence of tumor. Histological studies of tissue removed showed no malignant changes.

The patient did not respond to supportive treatment until digitalized four weeks after admission.

Case 8. Bronchial asthma and emphysema: Mr. R. C. S., aged 62, was admitted to the hospital January 27, 1949, with a history of cough for the past 15 years. He first experienced dyspnea and hemoptysis 9 years ago. He has been repeatedly hospitalized since that time for attacks of cough, dyspnea, hemoptysis and ankle edema. These episodes have responded to the usual cardiac regime except that there has always been some residual dyspnea. In the intervals between hospitalizations the patient stopped digitalis, ingested salt and took frequent large doses, up to 2 cc. of adrenalin for his attacks of dyspnea. Multiple sputum examinations over the past 9 years were negative for acid fast bacilli.

Physical examination revealed a thin orthopneic patient using all extrinsic muscles of respiration. Examination of the chest revealed an increased anterior-posterior diameter of the thorax, limited expansion, hyperresonance, decreased breath sounds and crepitant rales at both bases. The heart was enlarged to the left. The rhythm was regular at 120 beats per minute and there were no murmurs. The blood pressure was 140 mm. Hg. systolic and 70 mm. Hg. diastolic. The liver and spleen were not enlarged. There was clubbing of the fingers and pitting edema of both legs.

Laboratory: Hglb 14.0 gms., RBC 4.5 million, WBC 9,400 with a normal distribution; urine, specific gravity 1.009, otherwise negative. X-ray findings are illustrated in Figure 5.

Electrocardiographic studies demonstrated a P-"pulmonale" pattern. See Figure 1D.

Case 9. Emphysema heart disease: Mr. E. J. S., aged 61 years, entered the hospital August 30, 1949, with a chief complaint of progressive dyspnea on exertion for one year's duration and swelling of the legs for the past two weeks. A past history of "asthmatic bronchitis" at the age of 9 years with definite seasonal occurrence for four years was obtained. A few weeks prior to admission the patient had been digitalized and placed at complete bed rest by his family physician.

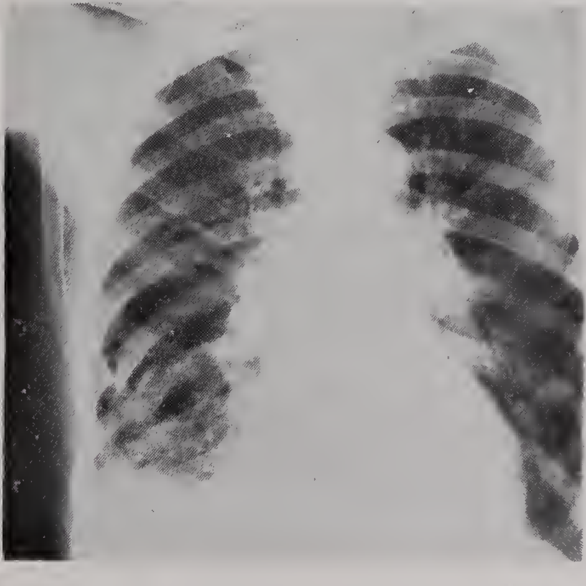

Fig. 5—Case 8. Roentgenogram of chest showing a prominent pulmonary conus and increased pulmonary vascular markings. There is some pleural reaction in the lower right chest and some mottling suggestive of a superimposed inflammatory change in this area.

Physical examination revealed a marked increase in the anteroposterior diameter of the chest. There was hyperresonance, decreased excursion of the diaphragm bilaterally, and diminished breath sounds throughout the chest. The heart sounds were distant and there was an accentuated second pulmonic sound. No murmurs were heard. The pulse was 90 and regular. The blood pressure was 134 mm. of Hg. systolic and 80 mm. Hg. diastolic. The liver was slightly enlarged.

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Laboratory: Hglb 15 gm., RBC 4 million, WBC 12,900 with a normal distribution. Urine not remarkable. X-ray findings are shown in Figure 6.

Electrocardiographic data exhibited a P-"pulmonale" pattern. See Figure 1E.

Case 10. Emphysema heart disease: Mr. V. L., aged 49 years, entered the hospital July 2, 1949, with a history of dyspnea since 1939. He was hospitalized in 1936 for dyspnea, orthopnea and ankle edema, and told he had "asthma" and "heart trouble." The patient had several previous admissions to this hospital for recurrent experiences of congestive heart failure. During the periods when he was free of swollen legs and orthopnea he was still short of breath with slight exertion. He stated that he had "rheumatism" at the age of 8 years and again at the age of 11 years. Upon admission he complained of severe shortness of breath and swollen legs for the past one week.

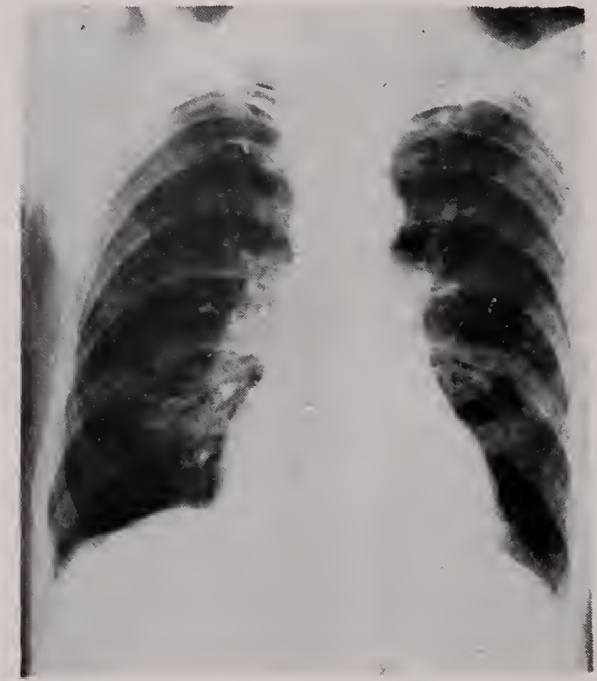

Fig. 6—Case 9. Teleroentgenogram of chest exhibiting a prominent pulmonary conus and emphysema.

Physical examinations showed an orthopneic patient with an emphysematous type chest. The chest exhibited limited diaphragmatic excursions bilaterally with resonance, and crepitant rales at both bases. The heart was enlarged to the left. The pulmonic second sound was accentuated and there were no murmurs. The rhythm was regular at 100 beats per minute.

Laboratory: Hglb 15.3 gms., RBC 5.3 million, WBC 8,600. Urine analysis revealed a fixed low specific gravity and 3 to 6 erythrocytes per h.p.f.

Roentgenographic and fluoroscopic studies manifested fibrosis in both lung fields and pleural thickening overlying the right lower lobe. There was evidence of emphysema. Excursion of the diaphragm was very limited but appeared to be equal on both sides. An esophagram showed moderate cardiac enlargement which appeared to be at least partially due to enlargement of the right heart.

Electrocardiographic studies illustrated right axis deviation, a right bundle branch block and auricular enlargement.

SUMMARY

Many of the symptoms found in cardiac patients are also common to pulmonary disease. Realization of this fact will answer many of the problems of residual symptoms in the compensated cardiac patient. In the cases reported dyspnea was a universal finding and in all cases it could be explained by underlying pulmonary disease. Pulmonary emphysema in particular is easy to overlook and yet it may be the cause for most of the symptoms. Emphasis should be placed on the fact that the diagnosis of pulmonary emphysema is a clinical diagnosis and the physician should not wait for the roentgenologist to make the diagnosis from a chest film. Fluoroscopy can be of help in demonstrating diminished excursion of the diaphragm.

The importance of considering chronic cor pulmonale in all cases of non-valvular heart disease in patients without systemic hypertension is stressed. Although the electrocardiogram and roentgenogram may be normal, the finding of a P-"pulmonale" pattern in the former or of pulmonary pathology in the latter should warrant re-examination of the patient to see if a diagnosis of chronic cor pulmonale is feasible.

(Bibliography in Reprints)

Medical practitioners of Maryland, after listening to complaints by a citizens' committee, that many persons were not receiving proper medical treatment because they couldn't pay for it, worked out a plan which appears to be working well.

Those who are on the list of indigents are given a "little white card" which entitles them to medical care. They select their own physicians who serve them at an agreed rate.

But there is also a class, not indigent in the usual sense of the word Those families that can pay their ordinary living expenses, but are not able to meet the expenses of illness.

These families can apply for, and if they qualify, receive the little white cards entitling them to medical care. The state pays the expense at an agreed rate.

While the system has been in use several years, it admittedly is still in an experimental stage and is subject to change as experience dictates. The plan provides for county advisory committees and a county health office.

While the Maryland system may not be perfect it does insure that all persons may have proper medical treatment, and it avoids the socialization feature that makes the proposed federal insurance plan odious to many.

From Norfolk, Nebr., News.

Management of Coronary Heart Disease*

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The term, Coronary Heart Disease, was suggested by Paul D. White(1). This is an all inclusive term which clearly focuses on the etiology of this disease, and should replace the older designation of arteriosclerotic heart disease. In order to manage this type of heart disease effectively, it is necessary to define certain clinical phases. The following classification is suggested:

1. Precordial pain,
2. Angina pectoris,
3. Coronary insufficiency,
4. Acute coronary infarction.

Precordial pain refers to any pain in the region of the heart. With present publicity given to the coronary heart disease we see many patients with all sorts of pain referable to the precordium. Among these, there is the left mammary pain(2) so frequently seen in tension and anxiety states. It is particularly typical of neurocirculatory asthenia. Myofascitis of the pectoral muscles, shoulder, and upper arm(3) also frequently produce pain ascribed to heart disease. There are certain chest wall pains, such as myofascitis, strain, intercostal neuralgia, causalgia, which stimulate angina pectoris. The gastrocardiac symptom complex(4), due to distention of the stomach, colon and possibly gall bladder disease, at times is confused with cardiac pain. Precordial pain is also seen in anemia.

Myofascitis of the myocardium needs to be given some consideration. This is an original suggestion, not substantiated by fact or findings, but we do know that the somatic muscles are subject to many aches and pains, and it seems reasonable that the bulk of myocardium may be subject to similar manifestations. Obviously, if all the above factors can be identified, there would be no purpose in adding this phase to classification of coronary artery disease. However, these symptoms cannot be absolutely differentiated from "germinating" coronary artery inadequacy. Frequently further observation is necessary to identify the true nature.

Angina Pectoris—This term should be reserved for that type of pain which by the history can be identified as of myocardial origin. Usually in this stage the heart is not enlarged, and often there are no electrocardiographic changes, except if the electrocardiogram is made at the time of this anginal syndrome.

Coronary Insufficiency — This term was proposed by Masters(5), now is quite generally accepted as a stage of coronary artery disease. The coronary circulation in this phase is inadequate. There may be, and usually are, occlusions of small branches of the coronary vascular tree. These small occlusions may become conglomerate. This is accompanied by an anginal syndrome which is quite typical from history. The heart may be somewhat enlarged. The electrocardiogram usually shows changes of myocardial anoxia. There is usually no sudden onset. This stage may progress to occlusions of a large vessel resulting in infarction, or this constant "nibbling" of small twigs may result in myocardial insufficiency, and terminate in congestive failure.

Acute Coronary Infarction—This phase refers to the sudden occlusion of a fairly large coronary artery resulting in a disturbance of coronary circulation, which seriously interferes with cardia function. Clinically this presents a severe type of heart attack, which may terminate fatally. This is frequently accompanied by profound shock.

The management, obviously, is dependent on the phase of coronary artery disease, which requires treatment. If the patient simply has precordial pain, the chief objective is watchful waiting. One must be very careful at this stage not to overemphasize doubtful findings. To do so is even worse than to place wrong emphasis on murmurs. In general, one can usually state that probably only ten per cent of this group have serious coronary artery disease. Therefore, this should be managed optimistically. The physician should be willing to stake the welfare of his patient against his diagnostic reputation. He must avoid making a cardiac neurotic. Watchful waiting with the use of mild analgesics, such as the salicylates, heat over the painful areas, mild sedation with a small dose of Phenobarbitol and Bromural, etc.

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*Presented at a General Refresher Course, October 10, 1950.

may be all that is necessary. If hypertension accompanies this syndrone, measures should be directed to this condition.

If the phase of coronary artery disease is established as angina pectoris, the most important part of management is to restrict the activity below that which causes pain. Frequently this varies but the patient must be definitely instructed to avoid pain. Long bed hours should be recommended together with a mid-day rest. If the pain is severe, the patient should stay in bed one day a week. Long periods of bed rest are not only not necessary but distinctly detrimental. Also an attempt should be made to see what can be done about emotional and tension states, which are frequently as disturbing as the physical factors. It is important to state frankly to the patient that his pain is due to coronary heart disease. Hoodwinking at this stage is detrimental and destroys confidence in the medical advisor. This phase can also be handled very optimistically as shown by good statistics. Frequently this stage is not too rapidly progressive.

Medication should consist of continued or intermittent use of such drugs as Amynophyllin-gr. 3 after each meal. Experience shows that this drug is effective, but the dose is frequently inadequate. Mild sedation is helpful. Nitroglycerine is the time honored remedy and is still very useful and effective in many cases. If hypertension is present, probably some of the longer acting vasodilators such as mannitol hexanitrate-gr.½ four times daily are indicated. These may prevent attacks.

Coronary insufficiency is perhaps the most difficult phase to manage, as this may begin with the stage of angina pectoris and may end with the stage of coronary infarction. Therefore, it is important to establish the degree of anoxic myocardium, also to establish the extent of fresh occlusion or old fibrosis. This may be determined by the duration and extent of the cardiac pain, leukocytosis, increased sedimentation rate, the stability of the EKG pattern, and the degree of cardiac enlargement. If there is some heart enlargement and definite electrocardiographic changes present, the restriction of activity would be considerable and periods of rest would be longer. In the moderately severe cases it is frequently necessary to insist on absence from any occupation, during which time the patient will be restricted to bed, chair, and room rest for a period of one to two weeks. A period of observation is frequently necessary to definitely establish the extent and degree of coronary artery disease. The subsequent management and therapy is dependent on the extent of cardiac injury. In the milder cases usually the activity can be considerably increased at the end of one or two weeks, such as going for automobile rides or even short visits to the office or other supervisory work.

Medication again would consist of that which has been described for angina pectoris. If the pain is persistent, papaverine-gr.½ to 1 gr. may be given by mouth, but preferably hypodermically if the patient is hospitalized. If there is definite evidence that fresh occlusion has occurred, an anticoagulant should be used, as in frank infarction.

The onset of acute coronary infarction is usually sudden accompanied by severe pain, with extensive radiation, persistent from days to weeks, accompanied by shock, acute peripheral circulatory failure, fever, leukocytosis, increased sedimentation rate, and in some cases acute congestive failure. Obviously, in this phase bed rest is imperative for a period of two to three weeks or longer, and in severe cases patient should even be fed by an attendant. Regulation of the bowels becomes a serious problem. Frequently these people are obese and use a bedpan with great difficulty, and in so doing accomplish a valsalva phenomena, which is very deleterious to the coronary circulation. Much less harm is done by letting the patient use a commode at the bedside. Obviously, if the patient is in shock, he is treated the same as shock for other conditions, but not so vigorously. It is desirable to keep the circulation at a low ebb, just sufficient to meet metabollic needs. It is very important not to use too much fluid. Fluid necessary, should not be given in larger quantities than 500cc. at one time. Blood transfusions or plasma should be used only in the most severe cases, and then the dose should be quartered or halved.

Adrenalin or Ephedrine to raise the blood pressure, should be used with the greatest caution, but these are rarely needed. Aminophyllin intraveneously should be given with extreme care, if used, should be given slowly preferably mixed with other fluids given intraveneously such as 10% Glucose. Papavarine-gr.½-1 intraveneously is thought to be of considerable value both as a vasodilator and also as an analgesic. It may be given intramuscularly or by mouth. Morphine and its derivatives, obviously, are needed to relieve pain. Demerol, 50-100mg. has a decided advantage over morphine and its derivatives in that it acts as a coronary vasodilator in addition to being a very effective analgesic.

Convalescence after an acute coronary infarction is extremely important. Activity can be increased considerably sooner than was formerly thought. However, there is no standard pattern. Each case must be evaluated individually. Probably very few cases become ambulatory in less than three weeks. Most cases with fresh occlusion require a period of three months convalescence. It must also be born in mind that an overinsistence on rest and restriction of activity may be harmful. In general, activity tolerated by any phase in coronary disease is not only permissible but desirable.

There are several drugs which have a definite place in the therapy of coronary artery disease. According to reports from the American Heart Association, Dicumeral has improved the mortality rate of coronary insufficiency and infarction by about twenty percent. If this drug is to be used effectively, the prothrombin time must be determined daily during the first week. After the response of the patient to the drug has been established every second or third day may be sufficient. The usual initial dose is 300mg. An attempt is made to reduce the prothrombin time to between 20% and 30%. The dosage is regulated by the protrombin time. The following schedule may be used: if the prothrombin time is between 50% and 80%-200mg. may be given on that day, if 30% and 50%-100mg. are given, and below 30%-none is given. Usually it is not necessary to give Heparin to reduce coagulability of the blood during the first forty-eight hours when Dicumeral might not be effective, as the chief objective is to prevent emboli. Probably it has little effect on the extension of the infarction which has already occurred.

As subintimal hemhorrage of the coronary arteries at times was thought to be a factor in occlusion, the use of Vitamin K has been recommended. However this is not very extensively accepted.

Quinidine-gr. 3-5 is sometimes given routinely, two to four times daily during the first two weeks after an acute infarction for the purpose of preventing auricular or ventricular fibrillation. This seems to be a good practice.

Recently Procaine Amide Hydrochloride has been recommended for ventricular arrhythmias. This is marketed by Squibb under the name of "Pronestl." It has an advantage in that it can be given orally. The suggested dosage is one gram orally followed by .5 to 1.0 gram every four to six hours. It may also be used intravenously. Experience with this drug is limited, and caution in its intraveneous use is recommended.

Arteriosclerosis is the pathologic process causing coronary artery disease with very rare exceptions. At present, much interest has been manifested in studying arteriosclerosis, particularly its relation to cholesterol and its related substances. This work is still in an early stage. Recommendations have been made that low cholesterol and low fat diets be used. As many subjects of coronary artery disease are overweight, it would be advisable to recommend a low fat and low cholesterol diet, although many in this field doubt whether it is effective in preventing or arresting the arteriosclerotic process.

The use of substances such as inositol and choline which supposedly have a lipotrophic effect have been recommended. Further investigation is necessary to establish their value. Davidson found no effect in preventing experimental arteriosclerosis in dogs by feeding these substances. The study of arteriosclerosis is intriguing, but is not sufficiently advanced to make definite statements. Its progress is awaited with great interest.

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X-RAYS AND VISUAL EXAMINATIONS BEST FOR DETECTING INTESTINAL CANCER

A combination of x-ray and visual examination has proved to be one of the most reliable ways to detect many cases of intestinal cancer in the early stages, according to the December issue of The American Journal of Roentgenology and Radium Therapy.

Dr. Harry M. Weber of Rochester, Minnesota, says the diagnosis of early intestinal cancer is especially puzzling because "the smaller and more circumscribed a lesion is, the less is its ability to cause clinical symptoms and signs."

Doctor Weber said he did not believe that examinations on a mass survey basis hold the key to early detection of intestinal cancer.

The Clinical Value of Multiple Unipolar Precordial Leads in Diagnosis of Myocardial Infarction*

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Since many physicians and most hospitals in Nebraska have added electrocardiographs to their diagnostic equipment, we feel it would be well to consider some of the newer methods used in electrocardiography, which we believe add increasing accuracy to the interpretation of electrocardiograms. Perhaps the most recent important contribution has been the development and use of multiple unipolar precordial and augmented unipolar extremity leads. Most electrocardiographers have been convinced of the value of multiple chest leads and they are satisfied this plan is a step forward in electrocardiographic diagnostic efficiency.

The committee of the American Heart Association on the Standardization of Precordial Leads(1) agreed that a single precordial lead from the region of the cardiac apex or any other part of the precordium is inadequate. Multiple precordial leads from the extreme right to the extreme left not only uncover other infarcted areas but the varying complexes which result are valuable for comparison. Also a single precordial complex is unreliable for comparison in serial observations since the precordial lead is seldom taken from exactly the same position.

In those cases suspected of myocardial infaction where the standard limb leads are normal, the multiple precordial leads are more likely to yield abnormal curves. Single apical leads most often fail completely in those cases in which the multiple precordial leads have the most to offer. Myers(2) and associates presented a series of cases in which the diagnostic signs of anterior infarction were found in the three standard limb leads in only two of twenty cases and were inadequate for localization purposes in all cases. Multiple precordial leads in these cases furnished positive or presumptive evidence and satisfactory prediction of the position of the lesion in all cases of myocardial infarction.

Myers(2) and associates state that in 57 cases of pathologically proved infarction involving the apical one-third or more of the anterior and lateral walls of the left ventricle there were 31 in which the standard limb leads were not diagnostic or strongly suggestive of anterolateral infarction. Thus the standard limb leads are of limited value even in recognition of large antero-lateral infarcts.

Failey(3) presents a series of 130 autopsied cases of myocardial infarction. In 22 of these patients with anterior infarction the diagnosis was accurate in only 36 percent when four leads were taken. In five cases of anterior infarction all were diagnosed correctly when six precordial leads were used. In eight patients with posterior infarction, 80 percent were diagnosed properly when unipolar extremity leads were added.

Goldberger(4) describes the bipolar precordial leads on a physiological basis as follows: The contacts between the surface of the heart and the extremities, through the contents of the thoracic cage, are broad and diffuse. Accurate localization can be obtained by chest leads in which one electrode (the exploring electrode) is placed in various prescribed positions on the chest wall directly over the ventricles, or the auricles, while a second electrode (the indifferent electrode) is placed at a considerable distance from the heart, such as the leg, the arms or the posterior chest wall. These are bipolar precordial leads.

The unipolar leads are obtained as follows: Each one of the three indifferent electrodes record a potential the algebraic sum of which at any instant equals zero. Therefore, if these three leads are connected to a central terminal, the potential of this will be nearly zero, and it can be used as the indifferent electrode. Then this indifferent electrode and the exploring electrode are connected to the electrocardiograph and the result is the clinical unipolar leads.

The CF leads in contrast are bipolar leads and in these the left leg lead may be far from indifferent. especially in vertical hearts.

The recording of unipolar extremity leads requires the use of the central terminal in Goldberger's modification of Wilson's method. The result is the augmented potentials which are 50 percent greater than by the Wilson technique.

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*Presented at the meeting of the Lancaster County Medical Society, February 21, 1950.

Unipolar precordial and augmented extremity leads are being widely used in electrocardiography.

In general, three standard leads and one precordial lead are taken and while this takes less time, all precordial leads should be made whenever a myocardial infarction is suspected and when symptoms of cardiac weakness or failure develop without obvious cause.

Wilson(5) points out that the only clue to diagnosis of myocardial infarction may come from the chest electrocardiogram, since some coronary injuries are often small and cause only minor complaints.

Zinn and Crosby(6) in February 1950 in a series of 306 autopsy-proven infarcted hearts present the following results:

1. Three standard leads plus one precordial lead offered patterns suggestive of myocardial infarction in only 51.5 percent of 256 cases.

2. Three standard leads with six precordial leads and unipolar extremity leads gave evidence of infarction in eighty percent of fifty cases. The twenty percent missed diagnoses were due to bundle branch block, left ventricular strain and digitalis effect, while one was recorded as diffuse cardiac disease.

3. The greater diagnostic value of the multiple precordial leads should result in their routine use in office and hospital procedure whenever myocardial infarction is suspected.

UNIPOLAR MULTIPLE PRECORDIAL AND EXTREMITY LEADS

The six precordial leads increase the diagnostic accuracy in the following:

1. All anterior myocardial infarcts, especially small infarcts.

2. All infarcts in the anterior part of the ventricular septum and adjacent areas.

3. High lateral infarcts in the ventricle.

4. Lesions in the myocardium associated with right bundle branch block.

5. Preponderant hypertrophy of a ventricle, especially the right pointing to pulmonary hypertension and cor pulmonale.

6. Some congenital heart lesions.

7. Acute myocarditis, pericarditis or toxemia.

8. Traumatic myocardial changes.

9. Slowly progressive coronary sclerosis (serial electrocardiograms).

Adding unipolar extremity leads to the six precordial leads results in showing:

1. The electrical position of the heart.

2. Hypertrophy of ventricles, especially right.

3. A posterior myocardial infarct when a significant Q3 is present and is confirmed by a significant Q in AVF(5). Lead AVF, therefore aids in differentiating a significant Q^3 from an insignificant Q^3.

4. How the electrical position of the heart aids in the understanding of the shaping of the electrocardiograms in the standard leads.

POSITION OF PRECORDIAL ELECTRODE

A joint Committee of the American Heart Association and the Cardiac Society of Great Britain and Ireland in 1938 recommended the exploring terminal be placed in the following positions:

1. In fourth interspace to right of sternum.

2. In fourth interspace to left of sternum.

3. Halfway between 2 and 4.

4. In fifth interspace in mid-clavicular line.

5. At level of position 4 in anterior axillary line.

6. At level of position 4 in mid-axillary line.

The distant electrode is connected with left leg (F), left arm (L) or right arm (R). If Wilson's unipolar precordial leads are used, they are called respectively, V1, 2, 3, 4, 5, & 6.

Three more leads, the augmented unipolar extremity leads of Goldberger[4], may be added.

At St. Elizabeth Hospital, Lincoln, Nebraska, six unipolar precordial leads, the unipolar augmented extremity leads and the three standard leads are routinely taken.

CASE REPORTS

The following five cases are reported which illustrate the value of the multiple unipolar precordial leads in the diagnosis of myocardial infarction when the three standard limb leads reveal equivocal or no abnormal findings:

CASE 1 (Figure 1)

March 30, 1949. T.R.M., male, age 58 years.

History of complaints of pressure in the precordial area and moderate dyspnea upon exertion during the past two years. He has had spells of "fast heart" during the past two years. A few days previous to the examination he had a severe attack of substernal pain and a tachycardia. Blood pressure: 90 systolic and 60 diastolic.

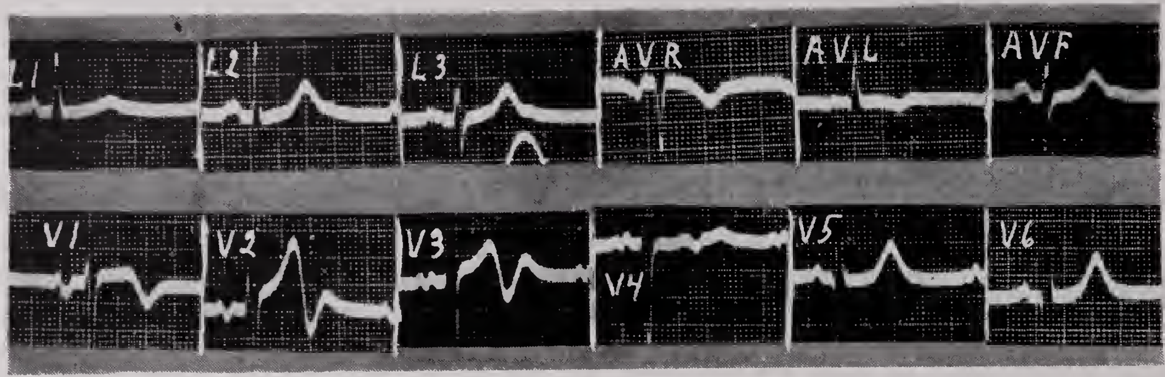

FIGURE 1. (Case 1). Recent anteroseptal myocardial infarction. Diagnosed by unipolar leads only.

ELECTROCARDIOGRAPHIC INTERPRETATION

Sinus rhythm; rate 48 per minute.
P-R interval 0.21 second.
Q-R-S duration 0.07 second.
Q-T interval 0.48 second—0.52 second.
Lead I: Normal.
Lead II: High T.
Lead III: Slurred R, S wave, T_3 greater than T_1.
V_1: Elevated S-T, negative T.
V_2: Elevated S-T, large diphasic T.
V_3: Elevated S-T, large diphasic T.
V_4: Low diphasic T.
V_5: Small Q, high symmetrical T.

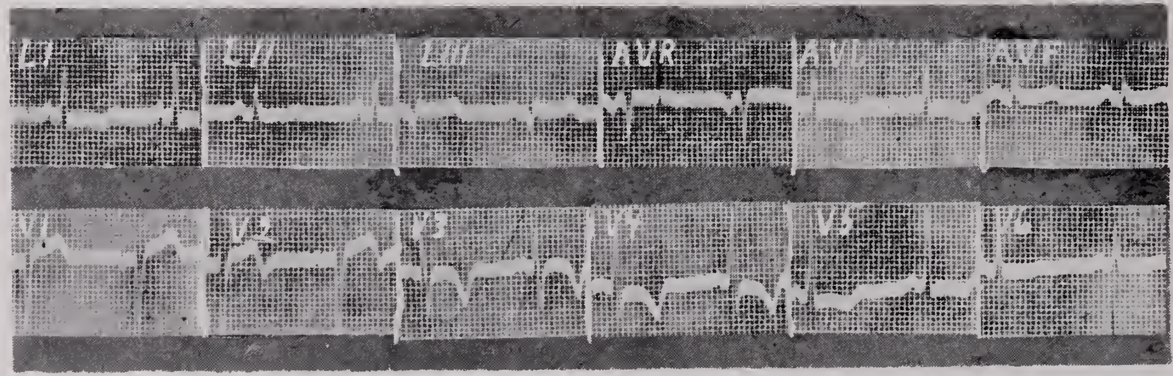

FIGURE 2. (Case 2). Old anteroseptal myocardial infarction. Unipolar leads make the diagnosis.

V_6: Small Q, high symmetrical T.
AVR: Normal.
AVL: Negative T.
AVF: Slurred R, S wave, large symmetrical T.

Diagnosis—Recent antero-septal myocardial infarction. Sinus bradycardia. Electrical position of the heart is semihorizontal with moderate clockwise rotation (anterior surface of the heart is moderately rotated toward left axilla).

In this electrocardiogram the diagnostic changes are found only in the precordial leads and evidence of myocardial infarction is not seen in the standard leads.

On December 14, 1949, he had a second myocardial infarct.

CASE 2 (Figure 2)

July 14, 1947. H.B.P., male, age 65 years.

History—Fourteen months ago the patient complained of severe substernal pain and was in bed four weeks. This was followed by a burning sensation in the substernal area after walking about two blocks. Has had this more or less since. Heart not enlarged. Blood pressure: systolic 96, diastolic 70.

ELECTROCARDIOGRAPHIC INTERPRETATION

Rate 62-67.
Sinus rhythm.
P-R interval 0.16 second.
Q-R-S duration 0.08 second.
Lead I: Slightly depressed R-T segment, negative T.
Lead II: Low T.
Lead III: Q 2mm. in depth, 0.04 seconds in duration, R 1mm. in height.
V_1: Elevated R-T.
V_2: Elevated R-T, diphasic T.
V_3: Deep symmetrical negative T.
V_4: Depressed R-T, negative T.
V_5: Depressed R-T, negative T.
V_6: Low diphasic T.
AVR: Diphasic T.
AVL: Slightly depressed R-T, negative T.

AVF: Small Q 0.5 mm. in depth and 0.02 second in duration, slurred R 2.5 mm. in height.

Diagnosis—Old anteroseptal myocardial infarction. Electrical position of the heart is semi-horizontal.

Note: Q_3 is due to the semi-horizontal position of the heart and is not the result of a posterior myocardial infarction. This is confirmed by the absence of a Q_2 and the lack of a significant Q AVF.

CASE 3 (Figure 3)

January 3, 1949. N.B.D., male, age 68 years.

History—Complains of severe "indigestion" of four days duration. Since then he has had a severe precordial discomfort and a tachycardia associated with this "indigestion". Blood pressure: systolic 182, diastolic 110.

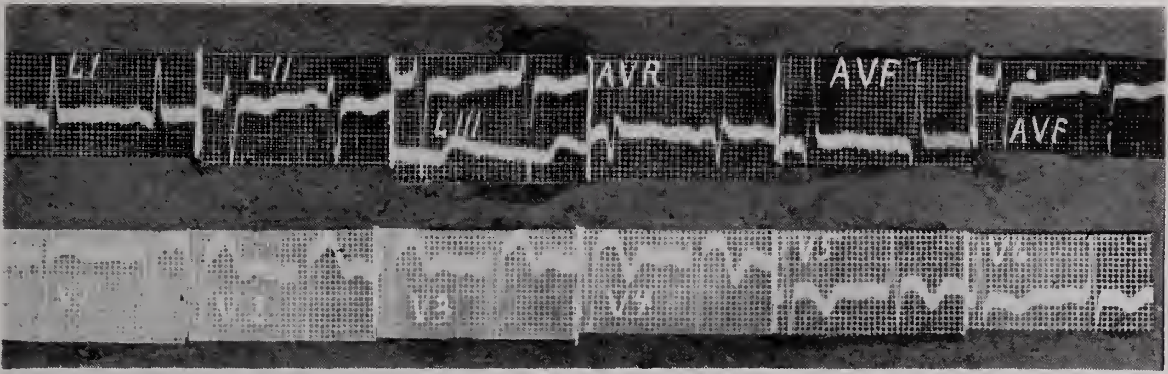

FIGURE 3. (Case 3). Recent anterolateral myocardial infarction. Diagnosis made by changes in unipolar leads.

ELECTROCARDIOGRAPHIC INTERPRETATION

Rate 78-79.

Sinus rhythm.

P-R interval 0.16 second.

Q-R-S duration 0.10 second.

Lead I: Small Q, isoelectric T.

Lead II: Deep S, negative T.

Lead III: Deep S, depressed S-T segment, negative T.

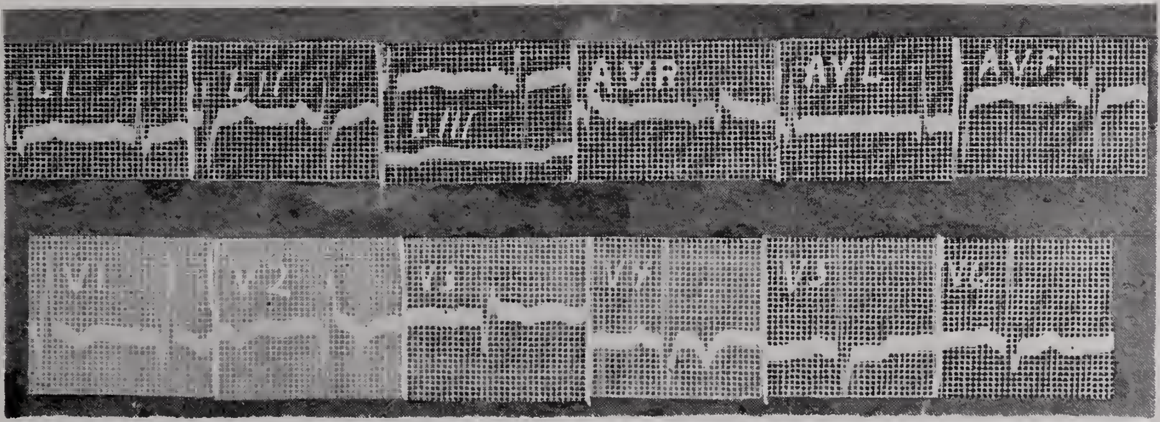

FIGURE 4. (Case 4). Right bundle branch block. Anteroseptal myocardial infarction. Diagnosis made by changes in unipolar leads which are not present in the usual right bundle branch block.

V_1: S-T convex upward.

V_2: Elevated S-T.

V_3: Elevated S-T, diphasic T.

V_4: Elevated S-T, negative symmetrical T.

V_5: S-T convex upward, negative symmetrical T.

V_6: Negative T.

AVR: R wave, positive T.

AVL: Q wave, slightly elevated R-T, low T.

AVF: Deep S, negative T.

Diagnosis—Recent anterolateral myocardial infarction. Left axis deviation. Electrical position of the heart is horizontal with clockwise rotation (anterior surface rotated toward left axilla).

Outcome, died, second myocardial infarct, March 16, 1949.

CASE 4 (Figure 4)

September 21, 1948. J.B.W., male, age 86 years.

History—In February 1948 in Peoria, Illinois had a "heart attack" which consisted of severe pain in the precordial area and this required morphine for its relief. He was in the hospital three weeks and in bed two months following this.

The electrocardiogram, four standard leads, taken at the time of the attack showed nothing abnormal. He has had precordial distress at various times since the first attack.

At the present time feels fairly well if he lives within his heart work tolerance, but if he walks fast the precordial distress returns. He has a generalized arteriosclerosis. Blood pressure: systolic 190, diastolic 110.

ELECTROCARDIOGRAPHIC INTERPRETATION

Electrocardiogram taken on September 21, 1948.

Sinus rhythm.

Auricular rate 64-68.

Ventricular rate 64-68.

Q-R-S duration 0.12 second.

P-R interval 0.16 second.

Lead I: Wide slurred S, Small Q.

Lead II: Slurred S.

Lead III: Deep S.

V_1: Deep Q wave, negative symmetrical T.

V_2: Deep Q wave, negative symmetrical T.

V^{3}: Deep Q wave, negative symmetrical T.
V^{4}: Q wave, S wave, negative symmetrical T.
V^{5}: S wave, biphasic T.
V^{6}: S wave.
AVR: Deep Q wave, wide slurred R.
AVL: Q wave, isoelectric T.
AVF: Deep S.

Diagnosis—(1) Right bundle branch block; (2) Anteroseptal myocardial infarct. Heart is in semihorizontal position. The diagnosis of the infarct is made entirely upon the changes in the unipolar precordial leads—deep Q in $V^{1,2,3,4}$ and negative T in the same leads.

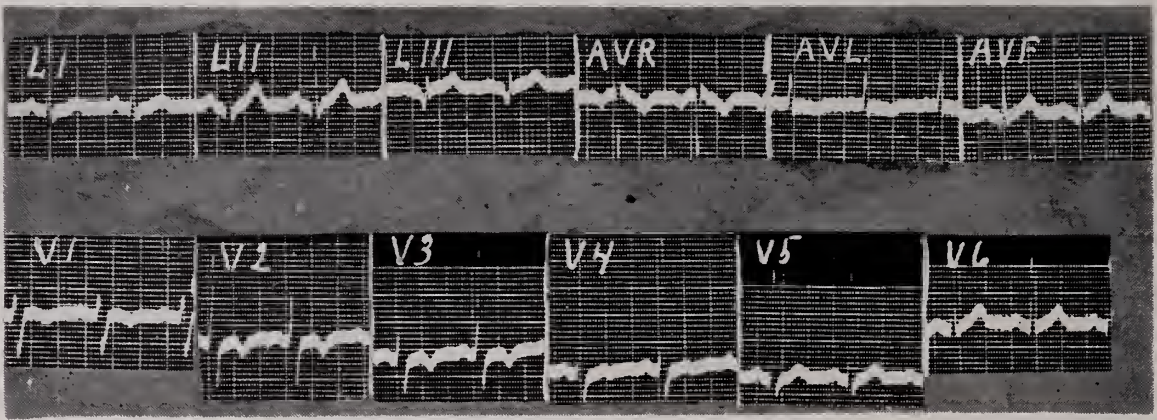

FIGURE 5. (Case 5). Acute anteroseptal myocardial infarction. No standard lead changes in 22 days after infarct.

CASE 5 (Figure 5)

September 26, 1949. C.R.L., male, age 50 years.

History—Had been well until in Chicago on July 10, 1949 had a severe substernal pain, relieved only by morphine. Was in hospital seven weeks. Abnormalities in electrocardiogram increased until August 1, 1949 (Figure 5) when a negative T was fully developed in $V^{1,2,3}$ and in AVL. Following this the electrocardiograms gradually retrogressed until October 31, 1949 the standard, unipolar precordial and augmented extremity leads returned to normal. Taking the history and electrocardiograms into consideration there is no doubt about his having had a myocardial infarct. No changes were seen in the standard leads during his illness, but the above abnormalities in the unipolar precordial and augmented extremity leads were the only ones noted in seven electrocardiograms. The only unusual change was the reversion of the electrocardiogram to normal by October 31, 1949, three months and twenty-one days after the infarct.

ELECTROCARDIOGRAPHIC INTERPRETATION
August 1, 1949

Auricular rate 95-100.
Ventricular rate 95-100.
Sinus rhythm.
P-R interval 0.16 second.
Q-R-S duration 0.06 second.
Lead I: Normal.
Lead II: Normal.
Lead III· Q wave, T^{3} higher than T^{1}.
V^{1}: Negative T.
V^{2}: R-T curved upward, negative symmetrical T.
V^{3}: R-T curved upward, negative symmetrical T.
V^{4}: Diphasic T.
V^{5}: Normal.
V^{6}: Normal.
AVR: Normal.
AVL: Negative T.
AVF: Normal.
Diagnosis—Acute anteroseptal myocardial infarct.

SUMMARY

An electrocardiogram in which the three standard leads are within normal limits does not rule out the possibility of myocardial damage.

To evaluate properly the cardiac status of a patient, six precordial unipolar leads in addition to the standard leads should be the electrocardiographic minimum.

The five cases presented show indefinite evidence or no findings of myocardial infarction in the standard leads while the six unipolar precordial leads show unequivocal findings of myocardial infarction.

It is our opinion that three standard leads, six unipolar precordial leads and three augmented unipolar extremity leads should be used in the electrocardiographic examination of every patient suspected of myocardial damage.

In conclusion we wish to make it clear that the electrocardiogram is only one part of a clinical examination.

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Myocardial Failure Complicating Pulmonary Insufficiency*

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The treatment of myocardial insufficiency has become standardized in recent years(1) and it can be expected that good results will follow in many cases of cardiac failure. When attention is directed, however, to the type of case in which favorable results are obtained, it is obvious that the majority are instances of chronic rheumatic or hypertensive-arteriosclerotic heart disease. When heart failure occurs in the presence of intrinsic pulmonary insufficiency, the results are not so favorable. It is the purpose of this paper to inquire into the special factors which make this combination of derangements so difficult to combat satisfactorily, and to set it apart from uncomplicated heart failure or heart failure associated with other conditions. Since this discussion is primarily on cardiac problems, only those aspects of pulmonary insufficiency which bear on associated heart failure will be considered. Three of these considerations are: the acid-base balance, the cardiac output, and the control of respiration.

ACID-BASE BALANCE IN PULMONARY INSUFFICIENCY

Acid-base balance is important because one of the key factors in the treatment of other types of heart disease—sodium restriction—may defeat the patient's own efforts to maintain physiologic equilibrium. In pulmonary insufficiency, among other derangements characteristic of the condition, a typical disturbance of the acid-base balance is observed. This has been called a "respiratory acidosis"(2) and is characterized by a high blood bicarbonate, expressed as increased CO_2 combining power.

The fundamental disturbance in the acid-base balance of pulmonary insufficiency is a rise in alveolar CO_2 tension due to inadequate respiratory exchange. As Gamble has expressed it,(3) "carbonic acid in plasma is there simply as a physical consequence of exposure of the plasma to the CO_2 tension of the residual air." If therefore, CO_2 tension of the residual air is increased, carbonic acid in plasma will be increased. Increase in $H.HCO_3$ requires increase in $B.HCO_3$ to maintain physiological pH, the extra base needed being obtained from chloride, which is correspondingly reduced. (See Gamble, chart 13.) In cardiac decompensation from other causes a decrease in alveolar carbon dioxide content or tension has been found.(4) This is reflected in the low bicarbonate level of the plasma which causes corresponding increase in chloride. "Since the free carbonic acid of the arterial blood varies as the alveolar carbon dioxide tension the former must also be diminished in cardiac decompensation. Lowering of the alveolar carbon dioxide content is not diagnostic but it does distinguish cardiac dyspnea from that due to diffuse pulmonary emphysema."(5) When there is diffuse pulmonary disease as well as cardiac decompensation the carbon dioxide content of arterial blood is above normal (because of increased CO_2 tension due to increased residual air). This increased concentration of carbonic acid in the plasma if allowed to proceed without adjustment would result in lowering the pH to limits incompatible with life. The pH is therefore kept within physiological limits by a simultaneous increase in sodium bicarbonate, which is accomplished at the expense of chloride. As a result there is found, typically, in pulmonary insufficiency, a high bicarbonate (measured by CO_2 combining power) and a low chloride level.(4) Simultaneous determination of the pH would reveal how efficiently the fundamental disturbance has been compensated but this is not practical.

The essential factor in our discussion therefore is that the individual with pulmonary insufficiency maintains equilibrium by elevating the plasma bicarbonate—through utilization of base previously combined with chloride. If this subject develops cardiac failure and if we do not individualize his treatment but routinely put him on low salt diet and reduce serum electrolytes by mercurial diuretics, we frustrate his own protective mechanisms — further deplete his chlorides, deprive him of base and throw him into the acidosis which up to then had been prevented as much as possible. To summarize what has been said, the individual with pulmonary insufficiency is maintaining a high bicarbonate. It follows that low sodium intake will be reflected in decreasing CO_2 combining power, and the paradox that the more the latter approaches the "normal" the closer the patient is to death. This will be shown in the protocols that follow. It is important to remember that a normal CO_2 combining power in a patient with pulmonary insufficiency is as much a sign of acidosis as a low value in a diabetic for example. Were pH determinations as easily performed as CO_2's that fact would be more widely appreciated. Thus sodium restriction in pulmonary insufficiency may be contraindicated and our treatment of associated heart failure must rest on other measures.

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*Presented before the first annual meeting of the Nebraska Heart Association, Lincoln, Nebraska, February 11, 1950.

Reviewed in the Veterans Administration and published with approval of the Chief Medical Director. The statements and conclusions published by the author are the result of his own study and do not necessarily reflect the opinion or policy of the Veterans Administration.

HIGH-OUTPUT FAILURE

Another factor in this syndrome of great importance is that cardiac failure, when it exists, is of the "high-output" type.(6) In this respect it is similar to that seen in hyperthyroidism, anemia, and in contrast to the "low-output" type of rheumatic valvular disease and hypertensive-arteriosclerotic heart disease. This type of failure is often associated with high venous pressure. The increased venous pressure creates an increased filling pressure. A high filling pressure will result in an increased diastolic volume and a corresponding stretching of the muscle fibers. This results in overstretching of the cardiac muscle fibers, with resultant failure. When the venous pressure is reduced, as by venesection, the filling pressure is lessened, the cardiac fibers are allowed to shorten, and increased cardiac efficiency results with improvement in the heart function.

CONTROL OF RESPIRATION

"The chemical control of respiration under ordinary physiological conditions is carried out through the action of carbon dioxide on the respiratory center. In emphysema, there are anoxemia and retention of carbon dioxide. The oxygen saturation of the arterial blood runs from a little below normal to around 85%. The CO_2 tension in well marked cases is from 50 to 60 mm Hg. (7-8%), and the CO_2 content of the arterial blood correspondingly high."(2) It is a well established fact that in emphysema the respiratory center is relatively insensitive to carbon dioxide. Therefore, the chemoreceptors of the carotid and aortic reflexes, which are stimulated by oxygen lack, may be relied on to carry on respiration. If oxygen want is relieved by O_2 administration, no stimulus remains to initiate respiration. The respiratory center, which has become insensitive to its normal excitant, CO_2 and which does not respond effectively to anoxia, is therefore "out of commission" in pulmonary insufficiency. The chemoreceptors mechanism, looked upon by those who have studied it as a "more primitive type of respiratory control, which serves as a last line of defense against respiratory failure,"(2) must carry on, and its natural excitant is O_2 want. A certain amount of anoxia is therefore necessary in pulmonary insufficiency to maintain respiration.

With attention drawn to these three factors, which form part of the derangements in pulmonary insufficiency, and which must be considered when cardiac failure complicates the picture, we may cite cases which illustrate some aspects of the problem. Study of these cases will make it clear that in addition to the problem of proper treatment, there are two primary problems: the establishment of cardiac failure or pulmonary insufficiency as the cause of the patient's symptoms; and the recognition of the onset of cardiac failure in pulmonary insufficiency and which symptoms are properly due to it.

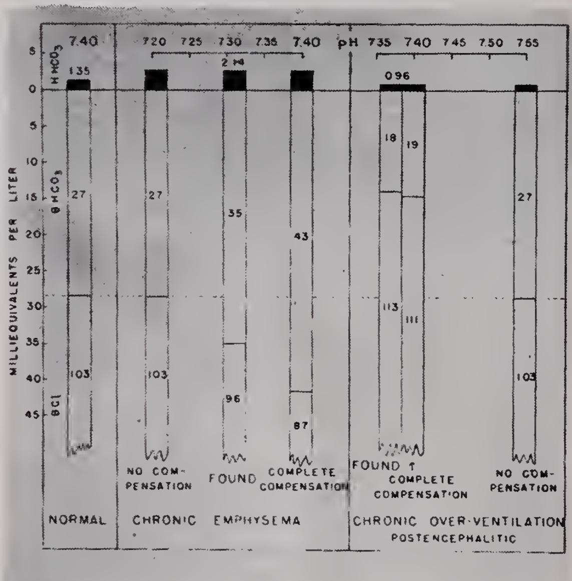

CHART 13

CASE REPORTS

The first two cases represent instances where proper recognition of the underlying disturbance produced satisfactory results.

Case 1. A.C.H. Intrinsic Pulmonary Insufficiency. Aggrevation of symptoms by treatment of myocardial insufficiency, improvement following correction of disturbed acid-base balance.

The patient, a 55 year old farmer, was hospitalized for weakness, shortness of breath, and swelling of the ankles. He gave a history of chronic "lung trouble" ever since pneumonia and influenza in 1918. There has been dyspnea on exertion, cough and sputum, but he had been able to do farm work till about six months before admission. A little later, in addition to the weakness and dyspnea, swelling of the ankles developed. He was digitalized by his local physician three days before admission. When he was admitted to the hospital the striking findings were lethargy, cyanosis and malnutrition. On physical examination there was no distention of the neck veins. The chest showed signs of emphysema, along with coarse rales. Blood pressure was 124/80, pulse 100. The heart was not enlarged and the liver was normal. There were no murmurs. There was marked pulsation in the epigastrium. Marked pitting edema of the ankles was present.

Admission blood count and urinalysis were normal. NPN was 23.5, CO^2 70%, Chlorides 462 mg. %. Serology negative, Serum proteins 12/12, Total 5.30, Albumin 2.30. EKG: Rate 75, right axis deviation, inverted T waves in VI, 2, 3; digitalis effect. X-ray: Pulmonary emphysema with probable bronchiestasis, both bases. The contour of the heart suggests cor pulmonale; there is also evidence of pulmonary congestion. Venous pressure: 6 cm. Circulation time: AT—13 sec., AL—8 sec. Vital capacity 29%

Owing to a misinterpretation, this patient was considered to be in cardiac failure and treated initially as such. He was maintained on digitalis, put on a salt-free diet, given ammonium chloride and repeated injections of mercuhydrin. He was placed on oxygen but was found to be markedly legthargic and this was discontinued with improvement. Further consideration made it obvious that this was primarily a case of pulmonary insufficiency. The mercurial diuretic was therefore stopped and the diet changed to one containing ordinary amounts of salt. On a regime devoted to pulmonary considerations there was improvement. Owing to the development of edema he was again given a course of mercuhydrin. Several days later there was marked dyspnea, lethargy and cyanosis. The patient appeared terminal. At this time the CO^2 was found to be 66%, Chlorides 528, and the urine pH 1.35. He was given 500 c.c. of sixth molar lactate by vein and sodium bicarbonate by mouth. The next day the patient was alert and breathing more easily. The CO^2 has risen to 100%, Chlorides were 396, and the urine pH was 9.00. Since then close watch has been kept on the CO^2 and as long as that has been elevated the patient has done well.

Case 2. J.M.C. Intrinsic Pulmonary Insufficiency. Secondary Heart Failure. Treated by venesection.

The patient, a 54 year old farmer, was admitted because of marked dyspnea on minimal exertion, weakness and loss of weight, chronic cough productive of large amounts of sputum. Past history revealed chronic pulmonary disease since World War I during which he stated he was (gassed.) Patient has been hospitalized several times previously for chest pain, cough, sputum, weakness. Diagnosis of pulmonary tuberculosis made in 1938, but no positive sputum ever found. There had been a 12 pound loss in the year and a half preceding the present admission. On examination the patient was malnourished, and dyspneic at rest. There was no distention of the neck veins. There was hyperresonance of the lungs, coarse rhonchi and some moist rales at the left base. Blood pressure 100/80. Heart sounds distant. Rhythm regular. Moderate peripheral arteriosclerosis. No enlargement of the liver. Admission blood count was essentially negative. Urinalysis negative. NPN 43 mg. %, CO^2 76%, Chlorides 495 mg. %. Serum proteins: Total 5.45, Albumin 2.55, Globulin 2.90. EKG: Right ventricular strain compatible with chronic cor pulmonale. X-ray: Pulmonary emphysema, pulmonary fibrosis, small heart. Sputum: Negative for tubercle bacilli on smear and culture. Gastric washings negative. During the first three weeks of hospitalization, the patient showed essentially the same picture as on admission. Then ankle edema was noticed for the first time. The next day the edema had increased and there was marked dyspnea and cyanosis. Moist rales were heard at the left base. Venous pressure was found to be 24 cm. CO^2 was 76%, chlorides 495, NPN 43. The patient was digitalized and given oxygen. Despite this, the patient‘s condition grew steadily worse. At this time a venesection was performed and 500 c.c. of blood was withdrawn. The following morning there was less dyspnea, the venous pressure had dropped to 8 cm. and it was obvious that great improvement had occurred. Two days later the edema had disappeared. CO^2 had risen to 93% and a week after that to 98%. At that time the patient was not dyspneic on bed rest and there was no edema or cyanosis.

The next two cases represent fatal outcome, due to uncorrected disturbance of acid-base balance. In both of these cases, the terminal event was incorrectly considered due to cardiac failure.

Case 3. O.P. R-38424 Adm. 9/22/49, died 11/29/49. This 49 year old white male was admitted to the hospital for treatment of asthma. The history stated shortness of breath had been present for the past 15 years, along with wheezing. Ankle edema and swelling of the left testicle had developed. About one week before admission dyspnea had become increasingly severe.

Physical examination on admission revealed marked dyspnea and cyanosis. There was retraction of the rib interspaces and flaring of the lower half of the thorax. Hyperresonance was noted on percussion. B.P. 140/90. Pulse 110. Heart not remarkable. Slight clubbing and cyanosis of the nailbeds were present. There was no edema.

Admission laboratory studies showed negative blood count, urinalysis, sed. rate and serology. NPN 43. Glucose 112. CO^2 102%, Chlorides 462. Chest x-ray report: Spontaneous pneumothorax, secondary to severe emphysema. EKG: Pulmonale, right axis deviation.

Course in hospital: On admission, patient was placed on low sodium diet, aminophyllin, ephedrine, etc. Although the diet was changed about a week after admission, the CO^2 and Chlorides decreased reaching a low of 297 for the chlorides a week before death. The patient was dyspneic throughout his hospital course. Pain across the chest was noted the last few weeks. There was a steady downhill progression. Hospital notes revealed the patient to be very dyspneic, weak, pale and cyanotic, with pulse ranging from 120 to 140, respiration of 40. On day of death, CO^2 was recorded as 66, and Chlorides as 396. The patient was digitalized, given intravenous fluids and glucose without effect.

Case 4. M.G. This 54 year old patient has had chronic sinus trouble and headaches. Six years ago he developed asthma and three years ago was sufficiently dyspneic to see a physician. He has also had indigestion for six months prior to admission, along with loss of weight. About one month prior to admission swelling of the ankles developed. He was then hospitalized and put on a low-salt diet. On admission the patient was dyspneic and there was audible wheezing. The chest was fixed in an expanded position and was barrel-shaped. Accessory respiratory muscles were used. The heart tones were distant, BP 124/80, pulse 84 and regular. There was pitting edema of the legs halfway to the knees and pitting edema of the sacrum.

Admission laboratory studies showed NPN 67, Total Protein 6, Albumin 3.31, Globulin 2.69, blood count, sed. rate and urinalysis negative. Serology negative. X-ray chest: emphysema, no cardiac enlargement. EKG: extreme right axis shift. Repeat x-ray with oblique films. evidence of right heart disease with marked dilatation of the pulmonary arteries and the vascular markings.

Course in hospital: On admission placed on salt-free diet, continued on maintenance digitalis and given mercuhydrin ½ c.c. Circulation time: At 25 sec., AL 14 sec. with sharp endpoint. Venous pressure 8 cm. VC 55%. The patient was given 2 c.c. mercuhydrin daily the first week in hospital, with loss of weight from 132 to 125 lbs. On 8/17, 1 week after admission, CO^2 was 62 and chlorides 330. ON 8/25 CO^2 was 84 and chlorides 363. NPN 32. Edema decreased as a result of diuretics but note was made of dyspnea on 8/16 and listlessness and cyanosis on 8/19, despite decreased edema. Oxygen therapy resulted in improvement. On 8/24 condition became critical, was dyspenic and scarcely responded, marked abdominal distention. Hypertonic saline given. Slight improvement. Expired next day. Nurses' notes indicate dyspnea and orthopnea on admission and marked ankle edema. Drowsiness noted on 8/22—difficulty to arouse patient for medication on 8/22.

CONCLUSIONS

The previous discussion makes it clear that the treatment of cardiac failure complicating pulmonary insufficiency is more complex and often less satisfactory than those cases in which there is no intrinsic pulmonary disease. We are forced to pay attention to symptoms and derangements arising from the pulmonary disease; and in order not to aggravate these disturbances we must rely more on what measures we have to improve the function of the heart and less on those the major effect of which is on tissues and other mechanisms secondarily involved in heart failure.

A routine or practical method to deal with this problem may be outlined as follows:

1. In any case presenting symptoms suggesting cardiac failure, the role of possible pulmonary insufficiency as cause of all or some of the symptoms should be weighed, and an accurate differentiation established before instituting treatment. Circulation times, venous pressure, and serum proteins determinations are frequently necessary for accurate diagnosis.

2. When cardiac failure is definitely present, it is important to segregate for special handling those individuals who have pulmonary insufficiency — either primary as a cause of the heart failure, or of sufficient degree to bring about the typical picture of pulmonary insufficiency in addition to cardiac failure.

3. Before treatment is carried out, cases of pulmonary insufficiency should have studies made to indicate the status of the acid-base balance—the CO_2 combining power and chlorides.

4. Sodium restriction should be secondary, minimal, and closely followed—since any limitation will increase the tendency to acidosis.

5. When pulmonary congestion or edema demand relief, mercurial diuretics must be used sparingly, and acidosis can be anticipated after an initial improvement.

6. Every effort should be made to improve pulmonary function—antibiotics to combat infection, antispasmodics and iodides and aminophyllin, binders to elevate the diaphragm, oxygen when indicated, etc., so that more adequate ventilation will occur.

7. Direct measures to improve cardiac function are especially important since improvement here will relieve symptoms without the necessity of upsetting the equilibrium of the buffer systems. These measures include digitalis in adequate amounts, absolute bedrest, oxygen when indicated, drugs to improve the circulation.

8. Venesection is often very effective, even lifesaving, when there is definite evidence of increased venous pressure and the response to other measures is not satisfactory. Shortening of the overstretched fibers of the overloaded ventricles may be expected to result in increased cardiac output.

9. Oxygen therapy may be dangerous if there is marked retention of carbon dioxide. When used it should be closely watched and discontinued if immediate improvement is not evident.

10. Reliance must be placed on frequent estimations of the CO_2 and chlorides. It must be remembered that normal value for CO_2 suggests acidosis in these cases, that drowsiness calls for immediate administration of alkali, in large amounts.

(References in Reprints)

Intradermal Analgesia

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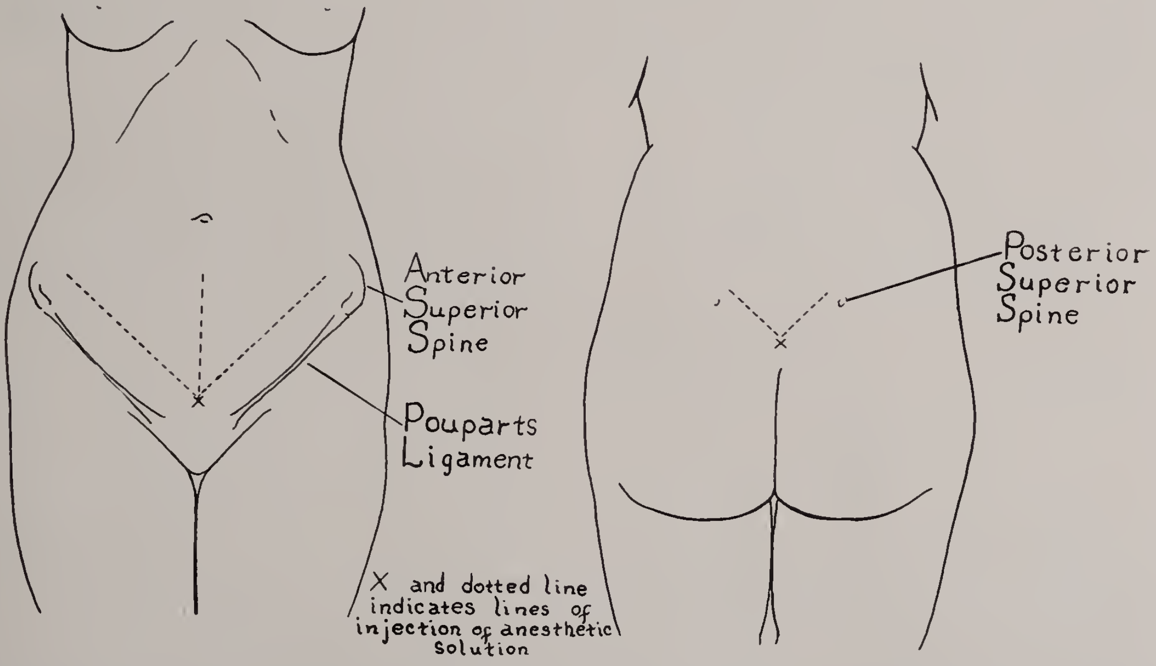
Very recently Abrams(1) reported that the pain of childbirth can be effectively relieved by an intradermal injection of 1½ per cent metycaine or other local anesthetic agents. Because of the proven safety of local anesthesia, particularly adapted for use by the average physician, a study of intradermal analgesia was undertaken by the Department of Obstetrics and Gynecology of the University of Nebraska College of Medicine.

Pain during labor is in reality a referred pain from the uterus to the lower abdomen and back. Splanchnic nerves from the viscus (uterus) terminate in the spinal cord at the level of the 11th thoracic nerve. Contractions produce a series of nervous impulses which pass from the uterus to the spinal cord. Continued bombardment of the spinal cord centers with these visceral impulses give rise to an irritable focus in the cord; so that the afferent impulses arising from the skin and entering the cord at the level of this irritable focus may give rise to pain referred to the peripheral structures supplied by those nerves. According to Abrams, local anesthesia agents injected at the peripheral terminal of nerves supplying the somatic areas of referred pain will effectively abolish the sensation of pain arising from visceral organs.

Figure I



X and dotted line indicates lines of injection of anesthetic solution

MATERIAL AND METHOD

A total of 29 patients were studied. These were obtained from the University service and from private practice. This series contained primiparas and multiparas. The age distribution was not significant. Ward cases used were not informed as to what was being done or hoped to be accomplished by the injection. Private patients were not informed until just before the injection was given. In this study, cases were selected during the early part of the first stage of labor without any premedication in order to evaluate the method. However, in respect to this last point, it might be advisable to give such patients 1½ grains of nembutal orally, ½ hour before injection of local anesthetic agents to lower side effects.

The following conditions were established for each case: normal pelvis, longitudinal presentation, presenting part above the ischial spines, contractions regular and painful and dilation progressing but not complete. Contraindications included: history of previous sensitivity to local anesthetics, an abnormal presentation or contracted pelvis, dermatitis or the presence of skin infection (including a pilonidal cyst).

The structures along the line of the proposed injection were prepared with 70% alcohol or merthiolate. Using a No. 26 B-D needle and a 10 c.c. Luer-lock syringe, either 1½% metycaine in saline or 1% novacaine in saline with 1-250,000 adrenalin was injected intradermally on the anterior abdominal wall according to the following configuration (Figure 1). The initial wheel was made approximately 1 fingers breadth above the top of the symphysis and measured 1 fingers breadth in diameter; this wheel was continued parallel to Pouparts ligament intradermally to the level of the anterior superior spine bilateral; finally, it was continued up the midline to within 2 fingers breadth of the umbilicus. After the patient was turned to one side, a wheel one fingers breadth in diameter was made intradermally at the base of Micheals rhomboid; the wheel was then extended intradermally in the shape of a V to the posterior superior spines. A total of 45 to 60 cc. of solution was used. Time of injection required approximately 10 minutes.

RESULTS

Our results are recorded in Tables 1, 2 and 3. Degree of the analgesia is designated as: no relief, partial relief, and total relief. Seventeen per cent of patients obtained no relief by this method. Eighty-three per cent obtained partial to complete relief of pain. The duration of analgesia was less than three hours in all of the cases studied.

TABLE 1
DISTRIBUTION OF CASES

	Primiparas	Multiparas
University Hospital	5	12
Private*	6	6

*Private patients were distributed among four members of our staff.

TABLE 2
DURATION OF ANALGESIA

	Failure	1 Hr.	1-2 Hrs.	Over 2 Hrs.
University Hospital	3	5	4	5
Private	1	2	4	5

The maximum duration of analgesia was 2 hours and 45 minutes.

TABLE 3
DEGREE OF ANALGESIA

	No Relief	Partial	Complete
University Hospital	3	3	11
Private	1	1	10

In many instances when the patient complained of a return of painful contractions the cervix was completely dilated with the presenting part well down in the pelvis. In other cases when the injection was made very early in labor the cervix was found to have progressed to 2-3 fingers of dilation but the presenting part had descended below the ischial spines when pain returned. It was our impression, as with the use of all local anesthetic agents, that this method was particularly well suited for the psychologically well adjusted obstetric patient. Various types of anesthesias were used for delivery. These included caudal, saddle block, nitrous oxide, cyclopropane and no anesthesia. The blood loss following delivery was not increased. The average length of labor in multiparas was 6.2 hours and in primiparas was 13.5 hours. It was our impression that labor was shortened following the injection. Out of 3 premature deliveries only one (27 weeks) showed evidence of respiratory difficulty. Four patients (all primigravidas) received supplemental analgesia, usually demerol, after the intradermal analgesia had worn off, or if the intradermal injection was not effective.

The principal objections to this method are: (1) ecchymotic areas form at the line of the injections and may take several weeks to disappear. (2) During the injection, patients complain of considerable discomfort. (3) The duration of analgesia is relatively short.

In favor of this method are: (1) Safety and ease of intradermal injection, (2) Effective relief of labor pain (less than 3 hours) in eighty-three per cent of the cases. (3) Elimination of depressant analagesic drugs (desirable for premature deliveries). (4) Apparent shortening of the length of the first stage of labor.

SUMMARY

In a study of 29 patients, intradermal analgesia was effective for the relief of pain during the first stage of labor. No ill effects were noted in mother or child. The length of labor was apparently shortened. This method is recommended for trial by the physician practicing obstetrics.

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ANTIHISTAMINICS INEFFECTIVE IN TREATMENT OF COLDS

Carefully controlled studies conducted at the University of Illinois College of Medicine and the Chicago College of Optometry "demonstrate that antihistaminic drugs do not prevent, abort, shorten, curtail, reduce or stop the common cold," according to Dr. Noah D. Fabricant of Chicago.

Dr. Fabricant, clinical assistant professor of otolaryngology at the university reported these findings in the A.M.A. Archives of Otolaryngology published by the American Medical Association. He confirmed numerous similar studies in the United States and Great Britain.

"It was observed," he said, "that antihistaminic drugs are no more effective than placebos in aborting a cold and that there is no validity to the contention that antihistaminic drugs are more effective if taken within a short time after the start of a cold."

He cited like findings in other studies and added that "sufficient time has elapsed and enough convincing evidence has been accumulated" to establish the ineffectiveness of the drugs in the treatmnt and prevention of colds.

HEALTH SERVICES FOR NEBRASKA CHILDREN

"Study of Child Health Services in Nebraska"

Report of The American Academy of Pediatrics

Chapter VI

HOSPITAL FACILITIES AND SERVICE

A. GENERAL HOSPITALS:

According to this study the term "general" is taken also to include maternity and pediatric care. The function of the general hospital is too well known to warrant a dissertation on it here, but in passing we might say that in addition to being a place where in-patient or bed care is provided, the general hospital has become a medical center where the services available to the community include out-patient facilities, public health clinics, health education conferences, and training for physicians and nurses. This study is particularly interested in the relation of such hospitals to child care.

1. General hospitals are included in this report, whether or not they are registered by the American Medical Association, if they:

a. Have five or more beds, and

b. Admitted at least 10 children or at least 10 obstetrical cases for delivery during the reported year.

2. The following types of institutions are not included in the study:

a. Federally owned hospitals, except these under the auspices of the Bureau of Indian Affairs.

b. Maternity nursing homes.

c. Hospitals in jails, prisons, and reformatories.

d. School hospitals and infirmaries.

e. Health camps.

Nebraska has a total of 113 general hospitals. 106 of these admit maternity cases and children, and six are strictly maternity hospitals. This leaves one remaining hospital that admits maternity patients and other adults but no children other than newborn.

Hospitals reporting separate pediatric units numbered 16, but there was no special pediatric hospital in the state at the time the report was completed. The Children's Memorial Hospital opened in March, 1948.

NUMBER OF BEDS FOR CHILDREN

The total number of beds for the 113 general hospitals was 4,642. The 16 hospitals reporting pediatric units had a total of 2,539 beds in all, 277 of which were set aside strictly for children, representing about 6% of all general hospital beds in the state (South Dakota 11% and Wyoming 6%). This means that throughout the state the ratio is one pediatric bed for every 1,159 children (South Dakota one to every 591 and Wyoming one to every 1,095). Of the 8 representative states the highest percentage is 9.8%, average 9.4%, and lowest 4.3%.

The comparative chart No. 14 shows that Nebraska with a total bed ratio of 14.45 beds (South Dakota 15.1 and Wyoming 14.95) per 1,000 children ranks sixth with respect to the eight selected states and below both South Dakota and Wyoming.

Highest	Average	Lowest	S. D.	Wyo.	Nebraska
20.6	12.5	5.7	15.1	14.95	14.95

Nebraska exceeds the ratio of the average state by 1.95 beds. Map No. 3 shows the distribution of hospitals by county and map No. 6 shows the child population by county.

During the report year the total admission of children in all the general hospitals of the state was 19,864; in relation to the bed capacity of the hospital, 3,647 were in the 5 to 24 bed hospitals, 5,553 were in the 25 to 99 bed hospitals, 8,910 were in the 100 to 249 bed hospitals, and 1,754 were in the more than 250 bed hospital.

Included in these figures were the 16 hospitals with pediatric units, where 10,752 children were admitted, of whom none were in the group of 5 to 24 bed hospitals, 504 were in the 25 to 99 bed hospitals, 8,494 were in the 100 to 249 bed hospitals, and 1,754 were in the more than 250 bed hospital. Such total child admission gives Nebraska a ratio 61.84 per 1,000 children (South Dakota 77 and Wyoming 47.4). The highest of the eight selected states had a ratio of 97 per 1,000 children.

HOSPIPTAL SIZE OF THE GENERAL HOSPITALS:

Whole State	113
5 to 24 beds	72
25 to 99 beds	27
100 to 249 beds	13
250 or more	1

The metropolitan and adjacent counties maintain 24 of the total hospitals as follows:

5 to 24 beds	8
25 to 99 beds	5
100 to 249 beds	10
250 or more beds	1

The location of these hospitals see map 3.

The isolated counties maintain the remaining 89 hospitals as follows:*

5 to 24 beds	64
25 to 99 beds	22
100 to 249 beds	3
250 or more	0

CHILD ADMISSIONS IN GENERAL HOSPITALS

For the whole state with 113 hospitals there was a total of 19,864 children admitted, this was at the rate of 4.3 per bed (South Dakota 5.1 and Wyoming 3.2 per bed). In hospital of 5 to 24 beds the rate was 2.8 and 3.8 respectively for metropolitan and isolated counties. In hospitals of 25 to 99 beds the rate was 3.6 and 4.7 for the two areas respectively, and in hospitals of 100 to 249 beds the rate was 4.8 and 3.9. The large hospital in the metropolitan area had a ratio of 3.8 child admissions per bed during one year. The per cent of child admissions in hospitals with pediatric units was 54.1% (South Dakota 60% and Wyoming 55.9%).

In relation to hospital size 18.4% of child admissions were in hospitals of 5 to 24 beds, 28% in hospitals of 24 to 99 beds, 44.8% in hospitals of 100 to 249 beds and 8.8% in the 250 or more bed hospital.

During the year there were 61.85 child admissions per 1,000 child population (South Dakota 77.22 and Wyoming 47.39), and the ratio of total beds per 1,000 children was 14.45 (South Dakota 15.07 and Wyoming 14.95).

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* For location of these hospitals see Map 3.

B. CARE OF NEW BORN

The total number of births during the report year was 23,229 in the hospitals tabulated. Of total amount of care for children in general hospitals, 53% is for the care of the newborn (South Dakota 46% and Wyoming 59%).

The following is an itemized summary concerning the newborn:

	Size of Hospitals by Number of Beds				
	5-24	25-99	100-249	Over 250	Whole State
Number of Hospitals	72	27	13	1	113
Number of Beds	984	1,247	1,951	460	4,642
Number of Bassinets	382	331	342	60	1,115
Number of Incubators	50	41	28	5	124
Number of Births (one year)	5,631	7,501	8,086	2,011	23,229
Days of care (total) to newborn	48,305	61,623	76,596	16,484	203,008
Days of care, average per birth	8.6	8.6	9.5	8.2	8.7
Percent of Hospital Births by Hospital Size	24.2%	32.3%	34.8%	8.7%	100.0%

C. OUT-PATIENT SERVICE FOR CHILDREN

Of the 113 general hospitals in the state, five reported having out-patient departments admitting children. There was no independent medical clinics reported. As to the five non-proprietary general hospitals, four were in the lesser metropolitan county and one in an adjacent county. One of these outpatient departments was in a 25 to 99 bed hospital and the other four were in 100 or more bed hospital. Total visits in one year by children in out-patient departments were 7,678, of which 7,568 of the total visits were to the four lesser metropolitan hospitals and 110 were to the out-patient department in the one 25 to 99 bed hospital in the adjacent county.

One hospital reported having a separate pediatric clinic but did not report any specified type of service i.e. Allergy, cardiology, eye, etc.

Two dispensaries are operated in the city of Omaha both admitting children for out-patient service on a three day a week basis. One dispensary is operated by the Creighton University School of Medicine which for the year 1948 had a total of 3,546 child visits. The other dispensary is operated by the University of Nebraska Medical School which handled 1,746 child visits. Also Nebraska Medical School operates a special child heart clinic which had 495 visits, these visits are exclusive of the visits listed above. The total visits for the two dispensaries was 5,292 for the year 1948, excluding the visits to the heart clinic. All the visits to these two dispensaries are independent of child visits to outpatient departments of general hospitals mentioned earlier.

D. HOSPITAL FACILITIES FOR THE CARE OF ACUTE POLIOMYELITIS CASES:

Of the 41 larger hospitals (25 beds or more) asked as to the care of acute poliomyelitis, 38 reported on this item. 26 of these hospitals admit acute poliomyelitis for care and/or diagnosis only, a percentage of 68 4% (South Dakota 76.7% and Wyoming 90%). Of all the hospitals reporting, six admit cases for care or 15.8% (South Dakota 36.7% and Wyoming 70%).

Of the 26 hospitals referred to, 15 are in the 25 to 99 bed category, thus 60% of this category reporting admit for diagnosis. Ten are in the 100 to 249 bed category and 83.3% of this group admit for diagnosis. One of the reporting hospitals is well over 250 beds and gives 100% diagnosis and care.

Of the six hospitals referred to as giving care, 3 are in the 25 to 99 bed category thus 12% of this group admit for care; 2 belong to the 100 to 249 bed category, and thus 16.9% of this category admit for care; and the one remaining hospital reporting for care of acute poliomyelitis is the only one in its class, that is over 250 beds, thus gives 100% care.

E. CHARACTERISTICS OF HOSPITALS CARING FOR CHILDREN

This porion of the study is designed to portray as accurately as possible the quality of care provided in Nebraska by hospitals admitting children. For this purpose the Study requested hospitals to answer a number of objective questions designed to bring out the degree of quality in respect to specified characteristics. Among these are such itms as space, medical staff, nursing, special services, organization of pediatric department or service, and adherence to certain accepted pediatric practices.

In respect to care of sick children the following chart indicated the number of larger hospitals (these having 25 or more beds) in relation to the specified characteristics and the ratio in each respect. (Column (a) lists the number of hospitals with specified item; Column (b) those without; and Column (c) those not reporting).

	No. of Hospitals			Percent of Hospitals with the Specified Characteristic		
Characteristics	(a)	(b)	(c)	Nebr.	Wyo.	S. D.
Registered by American Medical Association	39	2	0	95.1%	84.6%	93.8%
Separate Pediatric Unit	16	25	0	39.0%	46.2%	46.9%
Separate Ward for Infants Other Than Newborn	9	29	3	23.7%	30.8%	32.3%
Any House Staff*	8	21	12	27.6%	16.7%	9.4%
Graduate Nurse on Duty at All Times in Pediatric Unit	8	28	5	22.2%	16.7%	37.5%
Clinical Laboratory in Hospital**	29	6	6	82.9%	63.6%	53.1%
Qualified Dietitian on Staff***	15	17	9	46.9%	53.8%	41.9%
All Milk Pasteurized for Infants and Older Children	30	3	8	90.9%	90.9%	80.0%
Selected Clinical Laboratory Service Available****	24	10	7	10.6%	30.0%	34.4%

In the following list the same characteristics are indicated with respect to the number of hospitals with pediatric units. (The footnotes to the preceding table apply here also).

	No. of Hospitals			Percent of Hospitals with the Specified Characteristic with Pediatric Units		
Characteristics	(a)	(b)	(c)	Nebr.	Wyo.	S.D.
Registered by American Medical Association	16	0	0	100.0%	100.0%	100.0%
Separate Pediatric Unit	16	0	0	100.0%	100.0%	100.0%
Separate Wards for Infants Other Than Newborn	9	4	3	69.2%	66.7%	71.4%
Any House Staff	8	5	3	61.5%	------	20.0%
Graduate Nurse on Duty at All Tides in Pediatric Unit	8	3	5	72.7%	40.0%	80.0%
Clinical Laboratory in Hospital	15	0	1	100.0%	80.0%	53.3%
Qualified Dietitian on Staff	13	2	1	86.7%	66.7%	53.3%
All Milk Pasteurized for Infants and Older Children	14	1	1	93.3%	100.0%	71.4%
Selected Clinical Laboratory Service Available	14	1	1	93.3%	40.0%	40.0%

A comparison of the ratio in the two preceeding tables will give an idea as well as can be expressed in figures, of the extent of improved quality of care in the 16 hospitals with pediatric units over that of the aggregate 41 larger hospitals (25 beds or more) that were asked to report in this phase of the study.

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* Any House Staff includes internes, assistant residents, residents and fellows.

** At least the three following types of services are available: bacteriology, bio-chemistry, and hematology.

*** Graduate home economist or person with hospital internship in diatetics in charge of diet department.

**** Blood level for sulfonamides, sedimentation rate, blood culture and serum protein.

An analysis of the characteristics of the 72 small or 5 to 24 bed general hospitals follows:

Characteristics	With (a)	Without (b)	No Report (c)	Percent of Hospitals with Specified Characteristics Nebr.	Wyo.	S.D.
Registered by American Medical Association	41	31	0	56.9%	66.7%	36.4%
X-ray Service in Hospital	8	4	60	66.7%	61.1%	45.2%
Clinical Laboratory in Hospital	3	10	59	23.1%	13.3%	9.7%
Separate Nursery for Newborn Only	68	4	0	94.4%	100.0%	90.9%
Graduate Nurse on Duty at All Times in Newborn Nursery	21	45	6	31.8%	5.6%	60.6%

Only about 18.3% of all child admissions are to hospitals of this size.

The following table shows the number and ratio of the 41 larger general hospitals (25 beds or more) in relation to specified characteristics of care for newborn infants.

Column (a) and Column (b) list respectively the number of such hospitals with and without the characteristics referred to. Column (c) refers to those hospitals that did not report.

Characteristics	With (a)	Without (b)	No Report (c)	Percent of Hospitals with Specified Characteristics Nebr.	Wyo.	S.D.
Registered by American Medical Association	39	2	0	95.1%	84.6%	93.8%
Any House Staff	8	21	12	27.6%	16.7%	9.4%
Separate Nursery for Newborn Only	41	0	0	100.0%	100.0%	96.9%
Graduate Nurse on Duty at All Times in Newborn Nursery	22	8	11	73.3%	46.2%	87.5%
Nursery for Full-Term Sick or Suspect Newborn Separate from Well	3	24	14	11.1%	------	25.0%
Room Used Exclusively for Preparation of Formulae	18	21	2	46.2%	50.0%	37.5%
All Milk Mixtures Sterilized for Newborn	37	1	3	97.4%	91.7%	96.9%

Although Nebraska compares well with Wyoming and South Dakota in the foregoing table and in some respects better, there still appears to be deficiencies in regard to house staff, graduate nurse on duty in Newborn nursery, nursery for full-term sick or suspect newborn separate from well, and room used exclusively for preparation of formulae.

We can also measure the relative value of the quality of hospital service by a comparison of the specified characteristics with the number of births in the hospitals.

In the following table, column (a) shows the number of births in the hospitals having the indicated characteristics, and (b) shows the number of births in hospitals without such characteristics. The last column gives the percent of births.

Charcteristics	No. of Births in Hospitals (a)	(b)	(c)	Percent of Births Listed in Column (a) Nebr.	Wyo.	S.D.
Registered by A.M.A.	17,323	275	0	98.4%	88.1%	96.1%
Any House Staff	7,726	6.844	3.028	53.0%	0.2%	4.5%
Separate Nursery for Newborn Only	17,598	0	0	100.0%	100.0%	100.0%
Graduate Nurse on Duty All Times in Newborn Nursery	11,363	3,425	2.810	76.8%	64.9%	96.0%
Nursery for Full-Term Sick or Suspect Newborn Separate from Well	1,748	12.044	3,806	12.7%	------	34.6%
Room Used Exclusively for Preparation of Formulae	10,329	6,872	397	60.0%	49.4%	56.4%
All Milk Mixtures Sterilized for Newborn	16,266	806	526	95.3%	98.0%	99.5%

At this point let us compare our experience in Nebraska with that of the eight representative states (hospitals with 25 beds or more) in respect to the care of the Newborn.

Characteristics	Percentage of Hospital Births Occuring in Hospitals with Specified Characteristics Nebraska	Highest	Average	Lowest
Any House Staff	53.0%	90.0%	58.0%	4.0%
Graduate Nurse on Duty at All Times in Newborn Nursery	76.8%	98.0%	91.0%	77.0%
Room Used Exclusively for Preparation of Formulae	60.0%	94.0%	78.0%	29.0%
Nursery for Full-Term Sick or Suspect Newborn Separate from Well	12.7%	66.0%	37.0%	0.0%
Average Percentage	50.6%	87.0%	66.0%	28.0%

In this comparison it can be seen that Nebraska is 21% below the average for the eight representative states. A large contributing factor to this below average standing is the fact that Nebraska has about three times fewer nurseries for full term sick or suspect newborn separate from well than the average of the representative states. Also we are somewhat under average on all other characteristics. However, we are 22.6% better than Wyoming and but 2.6% better than South Dakota.

Volume and ratio of child admissions provide an important aid in determining the quality of hospital service. In the following table the number and percent of child admissions for one year are shown in relation to the specified characteristics in the larger hospitals (25 or more beds).

Characteristics	Admission of Children in Larger Hospitals With (a)	Without (b)	No Report (c)	Rates of Admission in Column (a) Nebr.	Wyo.	S.D.
	15,921	1,122	1,234	98.2%	92.7%	97.8%
Registered by American Medical Assn.	15,921	288	0	98.2%	92.7%	97.8%
Separate Pediatric Unit	10,752	5,465	0	66.3%	80.0%	69.9%
Separate Ward for Infants Other Than Newborn	7.792	7,622	803	50.6%	70.1%	47.9%
Any House Staff	7,983	5,804	2,430	57.9%	2.5%	9.1%
Graduate Nurse on Duty at All Times in Pediatric Ward	7,615	7,118	1,484	51.7%	36.9%	59.6%
Clinical Laboratory in Hospital	12,637	1.693	1,887	88.2%	85.4%	69.2%
Qualified Dietitian on Staff	10,423	4,807	987	68.4%	63.9%	66.2%
All Milk Pasteurized for Infants and Older Children	12,173	407	3,637	96.8%	97.4%	83.9%
Selected Laboratory Services Available	11,786	2,494	1,937	82.5%	35.7%	53.4%

Explanatory foot notes that appear on the first page of this section apply here as well.

The deficiencies here lie in the characteristics—separate pediatric unit, separate ward for infants other than newborn, and graduate nurse on duty at all times in pediatric ward. Although percentage of any house staff is not high, it is overwhelming better than either South Dakota or Wyoming (9.1% and 2.5% respectively). It is also about one percent better than the average for the eight selected states.

Child admission ratios for Nebraska are shown below in comparison with those of the eight selected states:

	Percent of Child Admissions to Hospitals with Specified Characteristics			
		8 Representative States		
	Nebraska	Highest	Average	Lowest
Separate Pediatric Unit	66.3%	91.0%	73.0%	51.0%
Graduate Nurse on Duty at All Times in Pediatric Unit	51.7%	71.0%	61.0%	41.0%
Any House Staff	57.9%	90.0%	56.0%	8.0%
Clinical Laboratory in Hospital	88.2%	97.0%	89.0%	72.0%
Selected Clinical Laboratory Services Available	82.5%	96.0%	77.0%	50.0%

Trained Dietitian on Staff 68.4%	94.0%	83.0%	35.0%
Separate Ward for Infants Other Than Newborn 50.6%	70.0%	52.0%	18.0%
Average of These Percentages 66.5%	88.0%	70.0%	39.0%

In this group comparison with the eight selected states, Nebraska with an average of 66.5% is only 3.5% below the average for the selected states, and is better than twelve points above South Dakota and Wyoming. The below average with the selected states is chiefly due to the below percentage of trained dietitians on staff and lack of graduate nurses on duty at all times in the pediatric unit.

Chapter VII

STATE PROGRAMS

1. DEPARTMENT OF ASSISTANCE AND CHILD WELFARE

a. Division of Services for Crippled Children: The National Survey covered only two items in Crippled Children Services, both referring to clinic services. In the first of these items, the number of children seen in clinics per thousand children in the state, Nebraska ranked eighteenth with a figure of five and five-tenths (5.5), per thousand. On the second item, the number of clinic visits per thousand children in the State, Nebraska was sixth, with a figure of fourteen. In view of the fact that Nebraska has a narrow administrative definition of a crippled child, this would indicate a rather high degree of coverage. Some other facts not included in the survey might be of interest in showing the extent of the services. During the year covered by the survey, a total of 2,018 children were under care. A total of 1,008 crippled children received 24,519 days of hospitalization. 2,161 appliances or appliance services were provided. The above figures are for the state wide Crippled Children's program. In addition to the above, a special Rheumatic Fever project which is limited to five counties in the eastern part of the state, cared for 210 children and provided 734 days of hospitalization. It should be noted that these services, though fairly extensive, were limited to children with orthopedic defects and cleft palates, leaving large numbers of children with other physical handicaps without an organized program.

b. Division of Assistance: The Division of Assistance through its program of assistance to Aid to Dependent Children, provided necessary medical care for about 7,500 children. Data on specific services are not available, but a total of $111,796.75 was expended. Service provided for these children included medical and surgical care, hospitalization, drugs, dentistry, and other necessary services.

Chapter VIII

COMPARISON WITH OTHER STATES

The primary purpose of this study and report was to determine the amount of medical care the children of Nebraska are receiving. In so determining and studying the report it is hoped that ways and means of improving this care may be formulated and put into action. The implementation of the study depends upon what care the children need, and since no standards of adequacy have been set up, the best we can do is to compare health services in Nebraska with those of neighboring state, South Dakota — with those of the eight representative states — and those of the United States as a whole. Next we can evaluate the care of the different types of counties which compose Nebraska are receiving compared with those areas for the United States, and finally compare the metropolitan and adjacent areas of Nebraska with the semi-rural and the semi-rural with the rural areas.

COMPARISON OF NEBRASKA WITH SOUTH DAKOTA

Throughout the study comparative figures have been given for Nebraska and South Dakota. In many ways the two states are similar as to the health set up of the child. The total amount of medical care given to children in Nebraska is greater by one third; the amount of health supervision for infants and pre-school children is greater by about one-half. The percentage of general practitioners reporting no hospital training ran about eight percent higher in South Dakota than in Nebraska. There was about one more child per 1,000 children under dental care in Nebraska than in South Dakota on an average day by dentists in private practice. Nebraska held 365 medical well-child conferences as compared with 81 such conferences in South Dakota, or about three times as many sessions per 1,000 children as our neighboring state. In both states the public health nursing is poor but South Dakota, even at that, is twice as good as Nebraska in the semi-rural areas and 11 times better in the rural areas. Nebraska's record shows that 9.7% of its school children are without school health service; in South Dakota 50% are without such services. Immunization in community health is somewhat lower in South Dakota. In dental service the examinations done in dental clinics is approximately the same for the two states with a slight advantage on the part of Nebraska per 1,000 children.

South Dakota has more hospital space set aside specifically for its children than Nebraska; namely 11% as against our 6%. In South Dakota there were 13 hospitals with out-patient departments out of 66 hospitals, compared with five hospitals admitting children to out-patient departments out of 113 hospitals in this state.

The percentage of hospital births in South Dakota was 86.4, compared to 95.5 in our state.

Finally the death rates for babies during the first year of life for South Dakota was 31.1 compared with 30.2 per 1,000 live births for Nebraska.

COMPARISON OF NEBRASKA WITH EIGHT REPRESENTATIVE STATES

Also throughout this study comparative figures have been given for Nebraska and the eight representative states. In summary it is interesting to note that the total amount of medical care given children in Nebraska in its metropolitan and adjacent areas is almost the same as that of the highest of the eight selected states, and in the isolated areas Nebraska is somewhat higher. Also the amount of care given in private practice in this state is above the highest for the selected states, but the amount of care in the clinics is considerably below even the average. If the comparison is limited to the isolated counties in the 8 selected states, care in Nebraska is greater in all counts. As to health supervision, the number of children other than newborn per 1,000 children in Nebraska receiving medical care is above that for the eight states, although this is due to the general practitioner, Nebraska is below the selected states in health supervision in regard to the clinics and those seen by the pediatrician. In visits for health supervision in Nebraska, 20% of the visits of the general practitioner are in this category, which is about the same as the average of the representative states and about 13% below the highest of these states.

Nebraska ranks fourth among the eight states in the number of children per physician; namely 273 children per physician as compared to the best state with 219 per physician. Nebraska also ranks third in the ratio of children to dentists. The number of children under dental care per thousand on one day is about average.

As to hospital facilities the chart shows Nebraska with a ratio of 14.45 total beds in general hospitals per 1,000 children—the state with the most beds has 20.6. The percentage of births occuring in hospitals with specified characteristics is 50.6%, this number representing an average of the percentages in relation to certain characteristics present. The most favored state has 87%. Similarly the percentage of child admissions to hospitals with specified characteristics in Nebraska is 66.5% as against 88% for the state with the highest average percentage.

Comparing medical well-child conferences by rate of service in visits per 1,000 children under five years of age per year, the figures are for the highest state 499, as against 44 visits in our state; by rate of service in patients the figures are 182 for the highest state and 22.7 for Nebraska. In the field of the physically handicapped, 4.7 visits per thousand children were made in Nebraska compared to 31.5 visits in the state with the greatest number. If we compare the visits made by public health nurses per year, we find 98.1 visits in Nebraska as compared with 223 made in the average of the eight states per thousand children per year.

As we compare the preceding facts with the eight representative states, we see that the disproportion in the number of children to the physician does not compare too poorly with that of the selected 8 states, Nebraska being fourth and above average; also we rank third and above average as to availability of dentists. There are deficiencies among the specified characteristics, which bring the rating of our hospital down to a certain degree. But these deficiencies seem to be in just a couple of the characteristics. Our community health services are not good at all, and especially the public nurse set up is very poor, but in total volume of medical care and heath supervision Nebraska is favored.

COMPARISON OF NEBRASKA WITH ADJACENT STATES

We will now compare Nebraska with her adjacent states in relation to the number of beds in general hospitals per thousand children, to the number of general practitioners in the same basis, and to the number of dentists:

BEDS IN GENERAL HOSPITALS PER 1,000 CHILD POPULATION

Highest ratio (South Dakota)	15.1
Lowest ratio (Iowa)	13.0
Average	14.0
Nebraska	14.5

GENERAL PRACTITIONERS PER 1,000 CHILD POPULATION

Highest ratio (Nebraska)	2.58
Lowest ratio (South Dakota)	1.50
Average	2.08

DENTISTS PER 1,000 CHILD POPULATION

Highest ratio (Nebraska)	2.40
Lowest ratio (South Dakota)	1.47
Average	1.87

COMPARISON OF NEBRASKA WITH THE UNITED STATES

Let us now compare Nebraska with the United States as a whole with regard to the three items given above:

TOTAL BEDS IN GENERAL HOSPITALS PER 1,000 CHILD POPULATION

Highest ratio (Nevada)	28.5
Lowest ratio (Mississippi)	5.5
Average	12.8
Nebraska	14.5

GENERAL PRACTITIONERS PER 1,000 CHILD POPULATION

Highest ratio (New York)	4.09
Lowest ratio (South Carolina)	1.00
Average	2.08
Nebraska	2.58

CHILDREN PER PHYSICIAN

Highest ratio (North Carolina)	764
Average	308
Lowest ratio (New York)	143
Nebraska	273

DENTISTS PER 1,000 CHILD POPULATION

Highest ratio (District of Columbia)	4.10
Lowest ratio (South Carolina)	0.46
Average	1.82
Nebraska	2.40

In comparing Nebraska with all other states in the union, a number of additional items are set down, followed by a figure representing the situation in Nebraska, and next a figure representing the average for the United States.

	Nebraska	U.S.
Child Visits per Calendar Day per General Practitioner	4.1	4.8
Maternal Mortality Rate	10.4	20.7
Percent of Children in Counties Without Medical Service in Public Elementary Schools	9.7	22.0
Physician Child Visits per Day per 1,000 Children (Total Sick and Well)	16.3	13.5
Children Under Medical Care per Day per 1,000 Children	16.2	13.8
Clinical Service for the Physically Handicapped Parents	4.7	4.6
Percent of Births Occuring in Hospitals	95.5	78.8
Total Beds in General Hospitals per 1,000 Children	14.5	12.8
Percent of Population Children	24.4	25.0
Pre-school Children Under Health Supervision per Day per 1,000 Children	6.0	5.5
Days of Care of Newborn Infants in General Hospitals per Year per Birth	8.7	8.0
Children per Dentist	417	548
Children Under Dental Care Per Day per 1,000 Children	3.0	3.3
Infant Mortality Rate (1945)	30.2	38.3
Per Capita Income	$1067	$1141
Number of Children per Physician	273	308
Child Visits to Outpatient Departments of General Hospitals per Year per 1,000 Children	23.9	62.0
Child Admissions to General Hospitals per Year	61.84	51.4
Beds Set Aside for Children in General Hospitals per 1,000 Children	0.86	1.20
Clinic Service for the Physically Handicapped—Visits	4.7	8.5
Quality of Hospital are for Sick Children, Percent of Child Admissions to Hospitals Without Certain Characteristics	44	28
Public Health Nursing Service to Children:		
Public Health Nurses (Ful Time) per 100,000 Children	10.0	40.4
Child Home Nursing Visits per Year per 1,000 Children	98.1	209.8
Percent of Births in Hospitals Without Certain Characteristics	29.1	29.0

Proportion of General Practitioners with Hospital Training:		
With 1 Year or More of Hospital Training Plus One Month or More in Pediatrics	55.0%	55.2%
Well-Child Conferences:		
Patients	22.7	62.0
Visits	44.0	182.0
Dental Hours in Clinics per Year per 1,000 Children	4.3	27.0
Public Health Nursing Service:		

COMPARISON BY FIVE TESTS

INFANT MORTALITY RATE PER 1,000 LIVE BIRTHS

Highest (Utah)	40.7
Average	33.8
Lowest (New Mexico)	95.3
Nebraska	30.2

BEDS SET ASIDE FOR CHILDREN IN GENERAL HOSPITALS

United States Average	1.20
Highest Ratio (Delaware)	2.40
Lowest Ratio (Mississippi)	0.21
Wyoming (Rank 35th)	0.91
Nebraska	0.86

NUMBER OF HOSPITAL ADMISSIONS PER 1,000 CHILDREN

Highest Number (Nevada)	97.3
Lowest Number (Tennessee)	25.6
Wyoming (Rank 31st)	47.4
Average (United States)	51.4
Nebraska	61.8

QUALITY OF HOSPITAL CARE FOR SICK CHILDREN AND NEWBORN INFANTS

(Percent of Child Admissions to General Hospitals Without Certain Characteristics)

Highest Ratio (Delaware)	6%
Lowest Ratio (Mississippi)	72%
Average (United States)	28%
Wyoming (Rank 35th)	42%
Nebraska	34%

QUALITY OF HOSPITAL CARE FOR NEWBORN INFANTS

(Percent of Births in General Hospitals Without Certain Characteristics)

Highest Ratio (Illinois)	11%
Lowest Ratio (New Mexico)	64%
Average (United States)	29%
Nebraska	49%
Wyoming	54%

PROPORTION OF GENERAL PRACTITIONERS WITH HOSPITAL TRAINING

	With 1 Year or More of Hospital Training		With Less Than 1 Year of Hospital Training
	1 Month or More in Pediatrics	Less Than 1 Month in Pediatrics	
United States Average	55.2	26.4	18.4
Highest (Delaware)	77.3	21.0	1.7
Lowest (Arkansas)	38.2	23.4	38.4
Nebraska	55.0	27.0	18.0
Wyoming (Rank 46th)	40.9	25.2	33.9

Comparison of Nebraska with the Metropolitan and Isolated Area of the United States: Proportion of Hospital Beds for 1,000 children:

United States		Nebraska	
Metropolitan and Adjacent Counties	Isolated Counties	Metropolitan and Adjacent Counties	Isolated Counties
15.4	8.4	19.0	11.4

Number of Physicians in Private Practice in relation to 1,000 child population:

United States		Nebraska	
Metropolitan and Adjacent Counties	Isolated Counties	Metropolitan and Adjacent Counties	Isolated Counties
4.1	1.8	4.5	2.7

In Nebraska, the physician child ratio is above the average ratio in isolated counties of the United States as a whole, and Nebraska has more beds than the isolated area as a whole.

Proportion of Specialists per 1,000 children:

United States		Nebraska	
Metropolitan and Adjacent Counties	Isolated Counties	Metropolitan and Adjacent Counties	Isolated Counties
1.6	0.3	3.0	0.33

Proportion of General Practitioners to 1,000 child population:

United States		Nebraska	
Metropolitan and Adjacent Counties	Isolated Counties	Metropolitan and Adjacent Counties	Isolated Counties
3.3	1.2	2.8	2.2

In Nebraska the proportion of specialists in all areas concerned is above the average as a whole, and also the ratio of general practitioners in rural Nebraska is almost twice that of the rural average for the United States.

Proportion of Dentists for 1,000 children:

United States		Nebraska	
Metropolitan and Adjacent Counties	Isolated Counties	Metropolitan and Adjacent Counties	Isolated Counties
3.4	0.6	3.7	1.8

In Nebraska the ratio in the rural counties is a good deal above that for the rural counties of the United States as a whole, and a little above the metropolitan area.

In all the above items Nebraska has in the rural areas a better standing than the average for the United States as a whole, and even in its metropolitan areas it is above the average as a whole except in the proportion of general practitioners.

Finally let us compare semi-rural Nebraska with rural Nebraska. The child population of the rural area is about equal to that of the semi-rural area being favored slightly (8,000 greater). In square miles, the rural area consists of 60.55% of the area of the state, the semi-rural 29.62%.

In the number of beds and general practitioners per 1,000 children, the semi-rural areas are favored. The number of specialists in the rural areas is 0.04 and only 0.6 in the semi-rural areas per 1,000 children.

The number of dentists per 1,000 children is a quarter greater in the semi-rural areas. The semi-rural areas have 12 physically handicapped clinics and the rural areas have but one. There are nine times as many public health nurses in the semi-rural areas as there are in the rural areas; 14 times as many home visits in the semi-rural counties as in the rural counties. In the semi-rural areas 8.9% of the school children are without either medical or nursing service, while in the rural areas 24% are without medical or nursing service. There are over three times as many immunizations for small pox and diphtheria and over seven times as many for whooping cough in the semi-rural areas as in the rural areas per 1,000 children. There were no dental clinics in the rural areas.

	Semi-Rural	Rural
Child Population	103,600	111,619
Child Percentage	32%	35%
State Area Percentage		
Number of Beds per 1,000 Children	11.46	11.25
Number of General Practitioners per 1,000 Children	2.59	2.25
Physicians per 1,000 Children	3.21	2.30
Specialists per 1,000 Children	0.61	0.04
Dentists per 1,000 Children	2.11	1.58
Percent of Births in Hospitals		
Child Admissions to General Hospitals per Year		
Pediatric Units		
Dental Visits—3.74 per 1,000 Children; 2.78 per 1,000 Children		
Well-Child Conference—No counties; no counties		
Physically Handicaped—12 Clinics; One Clinic		
Public Health Nurses:		
Number	9	1
Ratio to Children	1 to 11,500 Children	1 to 111,619 Children
Visits per 1,000 Children in a Year	39.7	2.8
Effective Buying Income		

See Map 1.

Chapter IX

CONCLUSIONS AND RECOMMENDATIONS

The purpose of this report as stated in the foreword is a factual presentation. No criticism of services or recommendations for extension or institution of facilities is contemplated by the Report Committee.

The Planning Committee described in the Introductory chapter will be charged as the continuing committee to build on these foundations.

Suggested recommendations from the latter committee includes the encouragement of establishment of medical centers built around existant facilities, and in towns throughout areas that are not as yet adequately supplied.

This suggests the corrolary of encouraging young members of the medical, dental and nursing professions to enter these communities with the view of maintaining permanent residence.

This also emphasizes the importance of offering more hours of undergraduate instruction in Pediatrics, and more facilities for refresher courses to graduates, in pediatric subjects. It is equally important to extend these advantages to those in the fields of medicine, dentistry, nursing, and also that of technical assistants.

The intervening distance between patient and medical center, emphasizes the weight of importance of good roads to enhance communication.

The committee recognizes that there are many valuable health services available in some areas. It urges the extension of these services to many or to all counties throughout the state.

Recommendation is made that existing liason between the Congress of Parents and Teachers and the medical personnel in the limited areas of present activity, be extended statewide. This applies to the matter of pre-school examination.

The splendid rapport which has existed in Omaha is unique even outside of the state. Its success recommends it.

The Dental profession has cooperated in every move to improve health and health services. The interrelation between these two fields of activity in health problems is close. The need for mutual dependence is admitted and should be encouraged.

There are many more avenues that should be pursued.

It is further suggested that the Nebraska State Medical Association appoint a committee to review the findings of this survey. And that such a committee may include members representative of the several groups and agencies that are so deeply concerned with the physical and emotional welfare of the child.

Chapter X

GLOSSARY OF TERMS USED IN STUDY

For the purpose of this study, and as used in this report, certain terms have been qualified as follows:

Children: When an upper age limit is required for the purpose of statistical tabulation, the limit has been set at the age of 15 years in order to correspond with currently available population data. Includes newborn and premature infants unless otherwise stated.

Community Health Agency: An agency supported by public or private funds offering one or more of the following medical or health services to children:

1. Medical well-child conferences.
2. Dental services.
3. Mental hygiene services.
4. Services for the physically handicapped.
5. Communicable disease control.
6. School health services.
7. Public health nursing services.

County Group: Counties have been classified and grouped together on the basis of fundamental characteristics: (a) population and (b) proximity to densely populated areas. In this way consideration is given to counties which, although they themselves may be sparsely populated, are nonetheless relatively close to metropolitan centers and the medical facilities ordinarily available in such centers. Five cassifications have been developed for the purpose of this Study:

Greater Metropolitan
Lesser Metropolitan
Adjacent
Isolated Semi-Rural
Isolated Rural

A county is classified as metropolitan if it has at least one city of 50,000 or more inhabitants. Counties are also classified as metropolitan if they include (a) densely populated areas touching metropolitan counties (adjacent and contiguous minor civil divisions have a population of 150 or more per square mile), and (b) 50 percent or more of the population of the county or at least 50,000 people within such densely populated areas.

A greater metropolitan county is one in which there is located any part of a metropolitan district of 1,000,000 or more inhabitants in and around the cities of Baltimore, Boston, Chicago, Cleveland, Detroit, Los Angeles, New York, Philadelphia, Pittsburg, St. Louis, San Francisco and Washington. Lesser metropolitan counties are all other metropolitan counties. Counties that touch a metropolitan county but themselves are not classified as metropolitan have been grouped together as adjacent counties. Counties that do not touch any part of a metropolitan county have been subdivided into isolated semi-rural and isolated rural counties. An isolated semi-rural county has at least one incorporated place of 2,500 or more inhabitants, and an isolated rural county has no incorporated community of 2,500 or more inhabitants.

General Practitioner: A physician or dentist who has reported not to limit his practice to a recognized specialty. Included are those with special interest in one field, who do not limit their practice to that field.

Health Supervision: Service to well children for supervision and guidance of growth and development, feeding and the usual problems of emotional and social development. Includes periodic examinations and immunizations. The service may be provided by physicians in private practice or by community health agencies.

Hospitals: Hospital refers to those which care for children, exclusive of federal hospitals (except Indian). Only those with five or more beds have been included in the study. "Homes" have been included if they render surgical, medical or obstetrical care.

Hospitals have been classified in two categories: (1) general hospitals, (2) special hospitals.

1. General Hospitals: This term includes maternity and pediatric hospitals.

2. Special Hospitals:

a. Nervous and mental hospitals and institutions.
b. Tuberculosis hospitals, sanatoriums and preventoriums.
c. Convalescent and chronic hospitals, rest homes and nursing homes.
d. Contageous diseases hospitals.
e. Orthopedic hospitals.
f. Eye, ear, nose and throat hospitals.

Small Hospitals: Hospitals with less than 25 beds.

Pediatric Unit: Five or more beds permanently set aside for the care of children. Limited to hospitals with 25 or more total beds.

Contagious Disease Unit: Ten or more beds set aside for communicable disease in general hospitals with 100 or more beds.

Medical Clinic: Outpatient service rendered by proprietary hospitals has been considered as private practice and not included with outpatient service. Out patient service in any hospital with less than 25 beds has not been included.

Medical Well Child Conference: A clinic operated by a health agency offering to children preventive medical services under the direction of a physician, including immunizations routine health examinations, advice on feeding and other care designed to maintain the health of well children.

Newborn Infant: An infant less than one month of age.

Non-White: Includes Negroes, Indian, Chinese, Japanese and other non-white races. Mexicans are not considered non-white. Tabulated for southern states only.

Pediatrician: A physician who reports that he limits his practice to the care of children.

PREMATURE INFANT: An infant whose birth weight is 2,500 grams or less (5 pounds 8 ounces).

PRIVATE PRACTICE: Care rendered by a physician or dentist for patients for whom he is individually responsible, as distinguished from care rendered by a physician or dentist who acts as an agent for an institution or agency which is responsible for the care. A physician on salary from a medical institution would be considered to be in private practice if he sees any private patients. Physicians in group practice are included.

SPECIALIST: A physician or dentist who is reported to limit his practice to a recognized specialty. For purposes of classification and tabulation, the term "internal medicine" includes dermatology, syphilology, cardiovascular disease, gastroenterology and tuberculosis. The term "surgery" includes urology, plastic surgery, neurological surgery and proctology. Gynecology has been grouped with obstetrics. Ophthalmology and otolaryngology have been classified together. Radiology, pathology, anesthesiology, clinical pathology and bacteriology have been classified together.

Visits: This term is used for visits to the doctor (physician or dentist) by the patient or by the doctor to the patient for either medical care or health supervision irrespective of whether the visit is in the home, hospital or doctor's office.

WELL-CHILD VISITS: Visits for health supervision (see Health Supervision) by general practitioners, pediatricians, internists, and obstetricians.

REFRESHER COURSE IN OBSTETRICS AND PEDIATRICS

Physicians contemplating registration for the MCH Refresher course in Obstetrics and Pediatrics April 23 to 27 are urged to apply immediately to the College of Medicine University of Nebraska.

Following is a list of guest speakers and their subjects:

OBSTETRICS

Dr. James W. Stevenson, Professor of Obstetrics and Gynecology, University of Michigan School of Medicine, "Breech Delivery," "Transverse Presentations."

Dr. Ralph Reis, Associate Professor of Obstetrics and Gynecology, Northwestern University School of Medicine, "Functional Tumors of Medicine," "Prolonged Labor."

Dr. John H. Randall, Associate Professor of Obstetrics and Gynecology, University of Iowa School of Medicine, "Abnormal Uterine Bleeding," "Gynecologic Cancer."

Dr. M. E. Davis, Associate Professor of Obstetrics and Gynecology, Chicago Lying-In Hospital, "Abortion," Post-Partum Hemorrhage."

PEDIATRICS

Dr. Herbert Miller, Professor of Pediatrics, University of Kansas School of Medicine, "Asphyxia Neonatorum," "The Premature Infant."

Dr. William Reilly, Professor of Pediatrics, University of Arkansas School of Medicine, "Endocrine Problems in Childhood."

Dr. James Fleet, Associate Professor of Pediatrics, University of Colorado School of Medicine, "The Treatment of Diarrhea," "Cortisone and ACTH Therapy."

Dr. Edith L. Potter, Associate Professor of Pathology, Chicago Lying-In Hospital, "Clinical Implications of the Rh Factor," "Fetal Abnormalities."

In addition there will be lectures, clinics and panel discussions.

DOCTOR

The March of Dimes Campaign is now in progress. The Infantile Paralysis Foundation, Inc., has done much to advance our knowledge of Poliomyelitis through liberal grants for research in all phases of the disease.

The Foundation has helped thousands of American families through a period of strain and stress by furnishing direct aid in payment of hospital and doctor bills.

The Foundation needs your help now.

Please give what you can and encourage your patients to support this worthy cause.

PROGRAM FOR EMERGENCY MEDICAL TRAINING IS OUTLINED

Only physicians highly trained can serve the national interest well, whether this be in a military or civil capacity, according to a report on medical education in time of national emergency.

This point was stressed by a joint committee representing the Council on Medical Education and Hospitals of the American Medical Association and the Association of American Medical Colleges. The committee, in the report made public November 24, outlined a program designed "to profit from the experiences of World War II, to avoid a repetition of the mistakes made then and to attempt to prevent the occurrence of new errors."

"One of the hard lessons learned from the medical training program employed in World War II was that in the national interest demands for speed and quantity should never be permitted to interfere with quality," said the committee in its report, published in the November 25 Journal of the A.M.A.

"It is, consequently, especially important that no steps be taken at the beginning of the present emergency that will interfere with the adequate training of physicians, either as medical students or as interns and residents, or with the supply of properly trained basic scientists."

The committee pointed out that such training requires an uninterrupted supply of students through college and into and through medical school and hospital. It nevertheless warned against acceleration, overcrowding of students or loss of faculty to the point where attention to the individual student would be diminished.

The statement also pointed out the importance of continued training of graduate students in the basic sciences to provide the personnel trained in these fields so urgently needed to staff the clinical departments of the medical schools and for the continuation of basic research in the medical sciences.

Instead of an accelerated program, the committee recommended that the academic year be extended in all schools to provide the additional training that will be needed by physicians to meet the special problems occurring in time of national emergency. Such an extension would permit more training in such subjects as the prevention and treatment of radiation injuries, bacteriologic warfare, chemical warfare, civilian disaster relief, public health, preventive medicine, industrial medicine, and injuries.

On the basis of the experience with the AST and V-12 programs in World War II, the committee also recommended against placing students in uniform or having them subsidized as a group by the government. Instead, it urged a program of government scholarships to be awarded, on the basis of economic need and demonstrated academic superiority, to students recommended by the medical schools. It also recommended government loans for students needing such assistance.

The committee also said "a plan should be devised which will define clearly the obligation of students who have been deferred for professional study to serve the government subsequent to completion of their training." Deferment, it stressed, should have as its only objective a later service in a needed capacity.

It also called upon medical schools to explore anew their resources for expanding teaching facilities without lowering quality.

"PUSH-PULL" TECHNIQUE MOST EFFECTIVE IN RESUSCITATION

An artificial respiration technique using a "push and pull" maneuver is the most effective of the manual methods, according to a report to the Council on Physical Medicine and Rehabilitation of the American Medical Association. The report also pointed out certain advantages of mechanical resuscitators but added that mechanical devices should be considered as adjuncts to and not substitutes for manual methods.

Drs. Archer S. Gordon, David C. Fainer and A. C. Ivy of the University of Illinois College of Medicine, Chicago, made a study of various methods of artificial respiration, both manual and mechanical. The study made by the Chicago doctors was to determine the most effective methods of artificial respiration, a procedure which saves many lives.

For their study they used 109 persons who had died less than a hour before the tests were performed, and nine live subjects who were taught to "voluntarily suspend their respiration."

For most of the tests, the doctors used a recently deceased person because, they said, such a subject is more comparable to a person requiring artificial respiration, except perhaps the deeply anesthetized person where there is a temporary cessation of breathing.

The effectiveness of artificial respiration depends on several things but this study was concerned mainly with the amount of air that could be brought into the lungs by various manual and mechanical means.

The doctors measured the minute volume of air exchange with manual methods by having the body inspire and expire into a spirometer.

With the mechanical methods, they used a very sensitive and accurate flow meter to record the volume of air exchange. A record could be made of the amount of air exchanged in the lungs with each respiratory movement.

According to the report a comparison of the findings shows that the results of the living subjects and recently deceased ones were "essentially in agreement" ecxept that the volume of air exchange in the living men was four times greater.

The Nebraska State Medical Journal

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Subscription $2.50 Per Year. Single Copies 35c Each

The Publication Board does not assume responsibility for opinions expressed in original articles published in this Journal.

Manuscripts should be typewritten, double-spaced, and the original, not the carbon, submitted.

Reprints should be ordered from the printer, The Huse Publishing Co., Norfolk, Nebraska.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

Vol. 36 February No. 2

THE A.M.A. TWELVE POINT PROGRAM

1. Creation of a Federal Department of Health of Cabinet status with a Secretary who is a Doctor of Medicine.
2. Promotion of medical research through a National Science Foundation with grants to private institutions which have facilities and personnel sufficient to carry on qualified research.
3. Further development and wider coverage by voluntary hospital and medical care plans to meet the costs of illness, with extension as rapidly as possible into rural areas.
4. Establishment in each state of a medical care authority to receive and administer funds with proper representation of medical and consumer interest.
5. Encouragement of prompt development of diagnostic facilities, health centers and hospital services, locally originated, for rural and other areas.
6. Establishment of local public health units and services.
7. The development of a program of mental hygiene with aid to mental hygiene clinics in suitable areas.
8. Health education programs administered through suitable state and local health and medical agencies to inform the people of the available facilities and of their own responsibilities in health care.
9. Provision of facilities for care and rehabilitation of the aged and those with chronic disease and various other groups not covered by existing proposals.
10. Integration of veterans' medical care and hospital facilities with other medical care and hospital programs and with the maintenance of high standards of medical care.
11. Greater emphasis on the program of industrial medicine.
12. Adequate support with funds free from political control, domination and regulation of the medical, dental and nursing schools and other institutions necessary for the training of specialized personnel required in the provision and distribution of medical care.

ORGANIZATION SECTION

The Annual Midwinter Meeting of the Council of the Nebraska State Medical Association will be held at the Hotel Cornhusker, Sunday, February 25, 1951. The meeting will be called to order at 10 a.m.

CIVIL DEFENSE

On Sunday, January 7, 1951, your Emergency Medical Service Committee met with Mr. Edward Gillette, State Director of Civil Defense, and Mr. James Pittenger, Governor Peterson's administrative assistant, to develop further the medical profession's part in the overall civil defense plan.

The following is a resume of what has happened thus far or what is currently being planned:

Governor Peterson has appointed a Nebraska Advisory Defense Committee. Dr. Roy Whitham of Lincoln, is a member of that committee. Just prior to the Christmas holidays, the committee elected Mr. Edward Gillette, former State Treasurer, as chairman.

Serving under the advisory committee are several sub-committees which will function in the various fields related to civil defense. Dr. Whitham is chairman of the sub-committee on Medical Services and Special Weapons Defense. The director of the State Health Department will be the administrative officer of Dr. Whitham's committee.

As this is written, Mr. Gillette plans to integrate Nebraska's civil defense program around communities of 5,000 or more population. These towns will serve as the "hub" for their respective counties. There will be just one director in each county, who will be appointed by the mayor, sheriff or by other local arrangement.

The possibility exists that a bill will have to be passed by the legislature in order to "tie together the efforts of city and county boards." This legislation may also be needed to determine the source of local financial support for the program, i.e., whether city or county.

At the meeting Dr. Sheets and committee members stressed to Mr. Gillette the importance of local cooperation with the county medical societies, especially in the appointment of medical personnel. Mr. Gillette stated that he was extremely grateful for the "willingness of your profession to take a part in this work."

Your Emergency Medical Service Committee asks that you cooperate with your local civil defense authorities whenever possible. This is particularly important in view of Mr. Gillette's statement that at least "95 per cent of the actual civil defense work and planning will be done on the local level."

STATE HEALTH BOARD

An important legislative decision was also reached January 7 at a joint meeting of the Public Health and Medical Service Committees. The joint meeting was called to discuss the advisability of submitting a bill to the state legislature providing for the establishment of State Board of Health.

Dr. George Underwood, chairman of the Public Health Committee, related that his committee had circularized all state associations regarding information on similar boards in their states. He received replies from 36, with all but two having this type of health body.

The committee chairman pointed out that under Nebraska statutes, the Board would be purely advisory since the governor is the constitutional head of the State Health Department. He felt that as an advisory body the board should be comprised of persons who are "capable of giving advice."

Dr. Underwood added that Nebraska's home rule laws make it impossible to enforce public health laws if the people are opposed to them. Enforcement of public health laws are opposed, he said, because it "costs money to clean up filth."

After a thorough discussion of the entire field, committee members felt that this type of advisory board would give state officials the necessary support to enforce the laws. It was unanimously agreed that the two committees should submit a bill to the state legislature providing for the establishment of a technical advisory committee to the governor on matters of public health.

STUDENT AMA

Student delegates from 48 medical schools met in Chicago December 28-29, 1950, to organize the Student American Medical Association. Their 48 schools have a total enrollment of 15,855.

The organization set as its objectives: (1) The advancement of medicine; (2) Contribution to the welfare and education of medical students; (3) Familiarization of its members with the purposes and ideals of the medical profession; (4) Preparation of its members to meet the social, moral and ethical obligations of the profession.

The student organization is a new section within the AMA which was formed so that students may early become acquainted with medical organization work. An executive secretary has been employed, with offices in the AMA headquarters in Chicago.

INTERIM SESSION OF THE AMERICAN MEDICAL ASSOCIATION

Held in Cleveland, Ohio
December 5 to 8, 1950

Delegate's Report

The 1950 Clinical or Interim Session of the American Medical Association was held in Cleveland, Ohio, December 5th to 8th. One of the worst snow storms that Cleveland has ever experienced occurred just prior to the opening of the sessions and undoubtedly interfered seriously with the attendance. Even so, about three thousand physicians registered for the five day meeting, fourteen of whom were Nebraskans.

All the clinical sessions of the scientific program were held in the Cleveland Public Auditorium. The program was so correlated that papers on associated topics were scheduled in the same room during the morning or afternoon. In this way it was not necessary for registrants to go from one place to another to cover a particular subject. This plan was quite effective inasmuch as many expressed themselves as believing it to be a step forward in program setup. The topics discussed were for the most part pointed toward the general practitioner and covered the gamut of the practice of medicine as of 1950. The scientific exhibit was excellent, and included in this exhibit were motion picture and television programs. This technical exposition was comparable to any to be seen at the annual sessions.

The Interim Session of the American Medical Association has become an outstanding annual event and it is my belief that more than fourteen physicians in the State of Nebraska should take advantage of the opportunities offered at these meetings by our parent body. It is not too early to start planning now to attend the 1951 Clinical Session, which will be held in Houston, Texas, December 4th to 7th.

PROCEEDINGS OF THE HOUSE OF DELEGATES

The House of Delegates convened for its first session at 10:00 a.m. Tuesday, December 5th, in the Ballroom of the Statler Hotel. Dr. Frank F. Borzell presided as Speaker. The first order of business was the election of the General Practitioner of the Year. Three candidates were nominated, namely, Dr. Jim Camp, Pecos, Texas; Dr. Dean S.

Luce, Canton, Massachusetts, and Dr. John W. Strange, Loogootee, Indiana. Doctor Luce was elected General Practitioner of the Year on the second ballot, and at a later session appeared before the House of Delegates and delivered a very fine address.

The next order of business was the address of the Speaker. In his address he expressed his regret that Dr. Roy W. Fouts, who because of illness was absent from a meeting of the House of Delegates for the first time in twenty-eight years. President Elmer L. Henderson, in his address, made particular note of the excellence and favorable results obtained from the advertising campaign conducted by the American Medical Association through the office of Whitaker and Baxter. He also commented on the wonderful job done by physicians in their campaign to defeat members of Congress who by positive attack had labeled themselves as being proponents of the socialization of medicine.

The Reference Committee on Reports of Officers, to which the President's address was referred, expressed the wish that Doctor Henderson had made mention of the new addition to the Journal of the American Medical Association under the caption of "The President's Page." It was believed that this page would have a far reaching influence in improving the understanding of the members of the Association not only as to the progress of the practice of medicine but the organizational work as well.

Incidentally I would like to point out that "The President's Page" has been omitted from the last few issues of the Journal of the Nebraska State Medical Association, and I personally hope it will be resumed at the earliest possible moment for the same reasons as given for instituting this page in the Journal of the American Medical Association.

The reports of the Secretary and General Manager, Dr. George F. Lull, and the Assistant Secretary, Dr. Ernest B. Howard, were received by the House and cognizance was given by the Reference Committee to which these reports were referred as to the excellent work being done by these two officers.

The Report of the Board of Trustees contained a multiplicity of diversified matters which had been dealt with throughout the year by the Board. This report is of real significance to all physicians in the United States and I would suggest that the members of our State Association read at least the abstracted report to be found in the Organization Section of Volume 144, Number 17, December 23, 1950. To try and comment on the entire report would necessitate more space than can be spared in our Journal. I would like to call your attention to a few points contained in the Board's report which were adopted by the House of Delegates.

The Kenney (New York) resolution on free choice of physicians for federal employees was adopted. This resolution directed the Board of Trustees to "seek an amendment to the Federal Law on Workmen's Compensation to the effect that all covered federal employees be granted free choice of physician for injuries sustained in line of duty."

The Reference Committee on the Report of the Board of Trustees also approved the action of the Board relative to the standardization of hospitals and recommended that "the study be continued until a satisfactory plan for the standardization of hospitals has been devised." A joint commission of eighteen, representing the American Medical Association, American College of Physicians, American College of Surgeons, and American Hospital Association was approved for this study.

Other items in the Board of Trustees Report worthy mention: (1) its recommendations regarding Public Relations; (2) the suggestion that rather than creating a new council to deal with Federal Medical Service, the duties of such a council be carried by the Committee on Federal Medical Services (subcommittee of the Council on Medical Service renamed, the old title being the Committee on Medical Care of Veterans), and (3) the approval of holding the 1951 Clinical Session in Houston, Texas, the 1952 meeting in Denver and the 1953 meeting in St. Louis.

Immediately prior to the adjournment of the December 7th meeting in the House, Dr. Louis Bauer, Chairman of the Board of Trustees, announced the appropriation of one-half million dollars out of the National Education Campaign Fund for the unrestricted use of medical schools in the basic training of future physicians, and suggested that all those interested in keeping medical education free of government control contribute to this fund individually. The House of Delegates, in enthusiastic response, stood and unanimously approved this action by the Board. Details for handling the fund are now being worked out. The Board set up principles, which were approved by the House, relative to federal aid to medical education, in essence that before federal aid be extended to medical schools all sources of private support for medical education should be exhausted and any legislation having to do with grants guarantee absolute freedom from government control.

The Board of Trustees suggested a plan whereby physicians who are unable to pay full dues to their county and state societies because of financial reverses will be exempt from paying their American Medical Association dues; they will receive the Journal of the American Medical Association only by direct subscription. The plan was adopted by the House.

The Council on Industrial Health pointed out in their report that the Committee and Consultants on the Industrial Medical Aspects of Civil Defense had been reactivated and it was stated that a real effort was being made to effect a joint committee composed of management, labor and the American Medical Association, the duties of which would have to do with health in industry. The Reference Committee to which this report was referred suggested that the work of this committee be combined with that of the Council on National Emergency Medical Service and all government agencies affected.

The report of the Council on National Emergency Medical Service contained five special recommendations: (1) that each of the state and territorial associations seek adequate representation on civil defense advisory committees at all levels of government; (2) that the American Medical Association request appointment of an advisory committee of civilian physicians in the new Civil Defense Administration; (3) that a copy of the report of the Council on National Emergency Medical Service be sent to secretaries of state and territorial associations and to the chairmen of emergency medical service committees in each state; (4) that the two remaining constituent associations who have not appointed an emergency medical service committee be urged to do so without delay; and (5) that the Council and the Committee on Blood Banks have appropriate space in the Journal of the American Medical Association so that information regarding the actions and recommendations of their respective committees be brought to the attention of the members of the association and the various emergency medical service committees.

The report of the Committee on Rural Health contained much food for thought. This committee was of the opinion that the solution of the rural health problem is gradually being achieved through cooperative community effort. The committee stressed seven points which in its opinion have contributed much to the progress already made. This report should be read by all members of our Association, especially those who are members of the Rural Medical Service, Planning and Public Relations Committees.

A comprehensive report was submitted by the Committee on Blood Banks. Among other suggestions approved by the House was that which recommended that "a state committee on blood banks be established in each state whose function would be to correlate the elements of the emergency blood program in its state." Those interested in Blood Banks, especially the Committee on Emergency Medical Service, should read this report in its entirety.

The Interim Committee on Constitution and By-Laws of the American Medical Association presented its report, which was unanimously adopted. Lack of space will not permit enumerating the many amendments made. There are some, however, which should be considered by our Association so that our Constitution and By-Laws may be so amended that there will be no conflict between the two.

The Council on Scientific Assembly recommended that the request for the establishment of a Section on Allergy and a Section on Medicine in Industry not be approved at this time. This recommendation was concurred in by the House. A new Section on Military Medicine, however, was established by the House on recommendation of the Council.

The report of the Council on Medical Service was read and unanimously adopted. In this report will be found reports from the Indigent Medical Care, Grievance, Physicians' Placement Service, Insurance and Medical Service and the Medical Care of Veterans Committees, all of which are subcommittees of the Council. By action of the House of Delegates the scope of the Council was broadened and the appropriation of an increased budget to carry out the additional functions of the Council was approved.

A resolution relative to the absence of Dr. Roy W. Fouts from this session of the House was read and unanimously adopted. For the record I would like to quote the resolution in toto in this report.

"WHEREAS, Dr. Roy Fouts, a member of this House of Delegates for 28 years, during which time he most ably served as Vice Speaker and Speaker of the House of Delegates, is unable to attend this session due to illness; be it

"RESOLVED, That the House of Delegates express its sincere hope for his speedy recovery and inform him that his absence from this session has created a definite loss to the American Medical Association."

The following resolution was also adopted:

"RESOLVED, That the House of Delegates of the American Medical Association urges all officers and members of the American Medical Association and all constituent associations to take immediate steps to implement the passage into law of a bill providing for the coordination and integration of all federal health activities under an independent agency with executive status, except the medical services of the Armed Forces and of the Veterans Administration."

The Committee on Chronic Diseases recommended that a chronic disease committee be appointed by each state medical association, there being such committees in only ten states at this time.

A statement by Mr. William S. Hutcheson, General President, United Brotherhood of Carpenters and Joiners, was read before a joint meeting of the House of Delegates and the National Education Campaign Committee. He and his union unalterably oppose the socialization of medicine, which was good to hear inasmuch as the majority of unions seem to favor it.

Much was accomplished by the House of Delegates and I am confident that the work done will have the approbation of Nebraska physicians.

RECOMMENDATIONS

1. That the President's Page in the Journal of the Nebraska State Medical Association be continued, for reasons already outlined in the body of this report.

2. That members of our Association read at least the abstracted reports of the Board of Trustees, the Council on Medical Service and the Interim Committee on Constitution and By-Laws, which will be found in the Organization Section of the Journal of the American Medical Association, Volume 144, Number 17, December 23, 1950.

3. That the recommendation of the Council on National Emergency Medical Service "that each of the state and territorial associations seek adequate representation on civil defense advisory committees at all levels of government" be carried out by our State Association.

4. That the members of the Association, especially members of the Rural Medical Service, Planning and Public Relations Committees read the report of the Committee on Rural Health of the American Medical Association.

5. That the Nebraska State Medical Association follow through with the recommendation made by the Committee on Blood Banks, which is as follows: "A state committee on blood banks be established in each state, whose function would be to correlate the elements of the emergency blood program in its state" and that the entire report be read by all members of the Association, especially the members of the Committee on Emergency Medical Service.

6. That following the 1951 annual session of the American Medical Association, at which meeting the Constitution and By-Laws will be amended, the Nebraska State Medical Association amend its Constitution and By-Laws so that there will be correlation between the two.

7. That the resolution adopted by the House of Delegates pertaining to the need for "all constituent associations to take immediate steps to implement the passage into law of a bill providing for the coordination and integration of all federal health activities under an independent agency with executive status, except the medical services of the

Armed Forces and of the Veterans Administration" be complied with by the Nebraska State Medical Association.

8. That a Committee on Chronic Disease be created by the Nebraska State Medical Association.

9. That members of the Nebraska State Medical Association contribute to the national fund set up by the American Medical Association for medical education.

J. D. McCARTHY, M.D., Delegate.

NEWS and VIEWS

Lincoln's new Heart Clinic was presented with five hundred dollars by the Nebraska Heart Association in January.

According to the Associated Press many British doctors who operate the National Health Plan and get most of their income from the Government are discontented.

Their chief complaint is that their pay, based on 1939 data on the costs of living and conducting a surgery, is too low.

Children's Memorial Hospital cared for 40 per cent of Nebraska's polio patients in 1950, according to Superintendent Grace V. Barber.

Thirty-three per cent of the state's polio cases were dealt with at the hospital the year before.

Young patients cared for at Children's Memorial during 1950 number 3,369.

The figure represents an increase of 591 over the number cared for in 1949, and an increase of about 1,569 over the number admitted during the first year of operation.

Of the 1950 patients, 1,919 were surgical cases.

Nebraska has more licensed doctors of medicine now than at any time in its history.

The bureau of examining boards at the capitol has reported that 96 new names have been added to the roster, making a total of 2,361. The additions are those who passed the 1950 examinations.

Early in January State Health Director Frank Ryder called upon Nebraska communities and counties who have not organized health units as required by law to do so at once.

About 300 questionnaires on the status of health units are being mailed to 209 cities and villages over 500 population and the 93 counties, he said.

Dr. Ryder said one of the main reasons in urging completion of health units where it has not been done is to help in the state's defense plans.

"A large portion of civil defense is built around the health departments, both on the local and state level," he said.

With the close of the past year, the New York State Journal of Medicine, has completed a half century of continuous publication.

Dr. Earle G. Johnson, Grand Island, has been reappointed by Governor Val Peterson to the state board of examiners in medicine and surgery.

Dr. Johnson has been a member of the board since 1942.

A subcommittee of the Nebraska council of children and youth recommended enactment of legislation to put the state health department under an unpaid board of health.

Members, appointed by the governor for three-year terms, would select the state health director on the basis of higher qualifications established by the legislature.

Hospitals in Scottsbluff admitted 6,494 patients in 1950 as compared with 6,385 in 1949.

The following item is quoted from the Sutton Press:

The Nebraska supreme court last week held it was legal for the Nebraska University hospital to charge for expensive drugs necessary for treatment of indigent patients sent by counties.

In one way this will give the poor patient sent from the county to the hospital for treatment a break. He can get the most expensive drugs necessary for either a cure or experimentation. But the state taxes necessary for the upkeep of the state hospital will not be increased. The folks at home will pay the bill directly.

Presumably, it means other hospitals treating indigent cases may follow the procedure and force the counties to pay. And if hospitals, why not local doctors?

Under state statute, the regents have the duty to prescribe rules for admission, and medical and surgical care of indigent patients, and to prescribe conditions for admission and dismissal and to take other measures to promote the hospital's efficiency, the judge ruled.

The "expensive medicine and drugs" amendment does not apply to ordinary drugs used in treatment on the wards, but to such items as these:

Antibiotics such as penicilllin, streptomycin, aureomycin and chloromycetin.

Intravenous fluids such as glucose, Ringer solution, protein solution and others.

Oxygen, vitamins and related products.

Anaesthetic gases and other similar kinds and types of drugs and medicine and forms of treatment.

The ruling was made November 19, 1949, because of rising costs of maintaining the hospital and limited funds available for it. County commissioners were notified of it about March 15, 1950, by letter.

The dean of the college of medicine is authorized to determine what expensive drugs and treatments go on the list.

The 1949 ruling says "No indigent patient shall be admitted to the hospital from any county except on condition that the county shall pay the cost of such new and expensive drugs, medicines and treatments not paid for by the patient at the time of his discharge.

EASTER SEAL SALE

The Nebraska Society for Crippled Children 1951 Easter Seal sale which begins February 25, calls attention to the special services — educational, therapeutic, vocational and rehabilitation — which the Society stands ready to give to the handicapped child who needs aid in the battle for a normal life.

The sale which continues until Easter Sunday, March 25, is the agency's sole means of raising funds for this work. Special attention to the needs of the cerebral palsied will be stressed in this year's campaign.

The Cerebral Palsy committee of the Nebraska State Medical Association recently initiated two important steps in this direction. Its first action was to write to every doctor in the state, informing him of the four diagnostic and consultation centers now available in Nebraska.

The committee also has recommended setting up a cerebral palsy unit of perhaps 15 beds in the State Orthopedic hospital, where cerebral palsy patients may be brought for one week or two, in order to complete diagnostic evaluation of their cases. Another aim is to train mothers of the children in remedial measures they can employ in the home.

The number of cerebral palsy cases under 21 years of age in Nebraska is estimated at 1,500, according to S. Orson Perkins, executive secretary of the Crippled Children's Society. More than 77 are registered in Omaha clinics alone. Lincoln has 23 under treatment, 40 more on the waiting list who can not be served, due to a lack of trained therapists.

Present consultation centers in Nebraska are as follows:

1. Dr. Robert Bruner, from Kansas City, Mo., holds private clinics at Children's Memorial Hospital in Omaha, every fourth Monday. Appointments may be made through the Nebraska Society for Crippled Children, 1504 Dodge street. Initial examination fee is $25; and $5 and $10 for subsequent visits. If the family cannot afford the fee, application should be made to the county committee chairman of the Nebraska Society for Crippled Children, or to S. Orson Perkins, executive secretary.
2. The extension clinics of the State Services for Crippled Children. These are held periodically at various points throughout the state. Information may be obtained at Room 358, Capitol Building, Lincoln 9, Nebraska, or from local county welfare offices. There is no fee.
3. The Dr. J. P. Lord School and Therapy Center, 36th and Hickory streets, Omaha. Clinics are held the first Tuesday morning of every month. Appointments may be made through the Crippled Children's Society. There is no fee.
4. State Orthopedic Hospital Clinic, 11th and South streets, Lincoln. Clinics are held each Friday morning. Appointments may be made directly with the hospital.

Patients will be accepted at each of these clinics "only if referred by the family physician." A report will be sent to the referring physician.

Dr. Louis S. Campbell of Omaha is chairman of the Cerebral Palsy Committee for the state medical association. So far as known, Nebraska is the only state which has such a committee functioning in the state medical organization. Others on the committee are: Dr. John M. Thomas and Dr. Frank Barta of Omaha, and Dr. S. J. Walters and Dr. C. Fred Ferciot of Lincoln.

One out of five doctors failed to pass physical tests. Of the doctor-draft physicians examined so far, about one out of five failed to pass Army's physical examination. The rate for physical or neuropsychiatric reasons is 19 per cent for doctors as against 17.4 per cent for regular draftees. Army lists the major causes for physician rejections as tuberculosis, duodenal ulcers, neuropsychiatric ailments, hypertension and severe asthma. Six per cent of those found below par are being taken into service on a waiver of their disability, lowering the per cent not eligible to about 13 per cent.

All cases of physicians rejected for physical reasons must be reviewed by a special military medical board in Washington, which has greater authority in accepting questionable cases than the induction stations.

An Army spokesman expressed the opinion that the rejection rate for physicians was about what might be expected. It was pointed out that the induction examinations the men now are undergoing actually are more severe than those they had to pass in World War II before being admitted to the Army as ASTP students. Also, the men are from five to ten years older than the average draft registrant, a factor which would tend to increase the rejection rate.

Perfection of a new synthetic narcotic to replace morphine was announced recently by Dr. Henry K. Beecher, civilian consultant to the Army Surgeon General.

Just arrived from Korea where the new drug, methadone, was tested at the farthest forward evacuation hospital near Hamhung on hundreds of American and allied wounded, Dr. Beecher declared that the field tests verified the findings that have been made in thousands of postoperative cases during the last three years at Massachusetts General Hospital.

Plans for organizing state and local advisory boards of nurses in event of national mobilization of manpower are under active consideration by the Nebraska State Nurses' Association.

With nursing already placed on the list of critical occupations by the U. S. Department of Labor, these plans are necessary to assure reasonably adequate distribution of nurses for both essential civilian needs and expected increased requirements for nurses in the armed forces, according to Mrs. Shoemaker, president of NSNA.

The plans are in line with a 14-point recommendation prepared by the Joint Committee on Nursing in National Security of the six national nursing organizations which was submitted to NSRB's Health Advisory Committee as a basis for governing mobilization of nurses and distribution of nursing service.

Among other points in the nurse-mobilization program are stepped-up recruiting of students for schools of nursing, encouragement of inactive nurses to return to practice, training and utilization of more practical nurses, systematic allocation of nurses among all essential services, and stabilization of nursing services through sound personnel policies. Effective rationing and redistribution of nursing service to cover the most essential needs will require many other major adjustments and measures, plus active cooperation of physicians, hospitals, public health authorities, and the general public, Mrs. Shoemaker said.

According to Mrs. Shoemaker, the joint nursing committee report to the NSRB showed that at least 65,000 more professional nurses than are currently employed in the U. S. are needed to meet present needs, without making any allowance for expanding military requirements.

Estimates of the Nebraska State Nurses' Association show that there are approximately 1,950 active professional nurses and 1,350 inactive nurses in Nebraska.

WOMAN'S AUXILIARY

MEDICINE'S ROLE IN PRESERVING THE AMERICAN WAY OF LIFE

Statewide promotion of the Essay Contest conducted by the Woman's Auxiliary to the Nebraska State Medical Association under sponsorship of the State Society, will begin with the second semester in the high schools of Nebraska. "Medicine's Role in Preserving the American Way of Life" is the subject for the contest which will be open to all juniors and seniors except children of doctors.

Early inquiries of interest in the contest from a number of high schools indicate a fine response to the idea. The subject will encourage sound thinking among high school students as to what constitutes good sound Americanism and how the doctor has contributed to our way of life.

Every doctor and every doctor's wife can contribute to the success of the contest by talking about it in his community and taking time to discuss the subject with any student who is entering the contest.

Auxiliary members in charge of organization in each councilor district are listed below. They have insofar as possible, appointed chairmen for each county in their district.

District I—Mrs. James O'Neil, Omaha.

Private Schools — Mrs. Arthur J. Offerman, Omaha.

District II—Mrs. M. A. Wood, Lincoln.

District III—Mrs. Clarence Brott, Beatrice.

District IV—Mrs. Val Verges, Norfolk.

District V—Mrs. Isaiah Lukens, IV, Tekamah.

District VI—Mrs. P. O. Marvel, Giltner.

Distrivt VII—Mrs. A. A. Ashby, Geneva.

District VIII—Mrs. N. P. McKee, Atkinson.

District IX—Mrs. B. F. Bancroft, Kearney.

District X—Mrs. Carl Gouldman, Ingleside Hospital, Hastings.

District XI—Mrs. Charles Heider, North Platte.

District XII—Mrs. C. L. Frank, Scottsbluff; Mrs. Clinton Dorwart, Sidney.

RULES FOR ESSAY CONTEST

Subject: "Medicine's Role in Preserving the American Way of Life."

Eligibility: Junior and Senior Pupils of all Nebraska High Schools, except sons and daughters of physicians.

Prizes: First Prize—State: $100.00 bond, plus expenses paid for trip to Nebraska State Medical Association meeting in Omaha in May, 1951. Second Prize—$50.00 Bond. Third Prize—$25.00 Bond.

Twelve Councilor Districts of the Nebraska State Medical Association: First Prize—$25.00 Bond. Second Prize—$10.00 Cash. Third Prize—Certificate of Honorable Mention.

Sources of Material: School and Public Libraries; Magazines and Newspapers; Your Family Doctor; Council on Medical Service, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois; Whitaker and Baxter, One North LaSalle Street, Chicago 2, Illinois.

Form: Typewritten or clearly written in ink, 8½x11-inch paper. Work must be original. Credit must be given for quotations. Name of pupil, school, and teacher at conclusion of essay.

Length: Not over 1,500 words.

Dates: Entries must reach councilor district representatives by March 15, 1951.

Winners of councilor districts must be in to state representatives by April 1, 1951.

Winners of state will be announced by May 1, 1951.

Judges: Lawyer, clergyman and layman in each councilor district; state judges to be selected.

Lancaster County Medical Auxiliary met for a 1 o'clock luncheon, November 6, 1950, at St. Elizabeth Hospital Nurses' home. Following the business meeting, Mr. M. C. Smith, Executive Secretary of the Nebraska State Medical Society, showed a movie of the National A.M.A. convention which was held in San Francisco.

On November 25th a dinner dance was sponsored by the auxiliary at Cotner Terrace for members of Lancaster County Medical Society.

Lancaster County Medical Auxiliary met January 8th at 1 o'clock for a dessert luncheon at the country home of Mrs. Roy Whitham. Mrs. Frank Tanner presided at the business meeting. The program consisted of a talk on Tuberculosis Control by Mrs. Dorothy Teal Ogden, Executive Secretary of Lancaster County Tuberculosis Association, and an illustrated talk on her recent trip to Europe by Mrs. C. Fred Ferciot.

MRS. C. K. ELLIOTT,
Publicity Chairman.

Mrs. Harold Snyder discussed "Presbyterian Missions of the Southwest" Wednesday evening, January 3, before the Adams County Medical Society Auxiliary. She was introduced by Mrs. E. C. Foote.

The Auxiliary met at the Hastings State Hospital for dinner with the society, followed by separate meetings. Thirteen members and guests of the Auxiliary attended.

Programs for 1951 and group projects were discussed. The women agreed to assist with the Red Cross blood bank project.

MRS. L. W. RORK,
Publicity Chairman.

NEBRASKA STATE DEPARTMENT OF HEALTH

The Nebraska Public Health Association organized in November, 1950, now has seven sections:

Health Officers, Sanitation, Laboratories, Vital Statistics, School Health and Health Education, Safety Education, and Public Health Nursing.

The Association now has 160 paid memberships.

The Venereal Disease Division has, during the past year, conducted two surveys in addition to routine follow-up.

The Veterans Administration referred 225 previously treated World War II cases which had been treated for syphilis. Approximately fifty per cent of these were located and serology and spinal fluid examinations obtained. Out of the number on which we obtained tests we found only three positive serologies and one positive spinal, which were referred to either a private physician of their choice or to one of the State Health Department facilities.

In addition to the above survey, we made a special study of children of previously treated pregnant mothers who had received penicillin therapy at the Rapid Treatment Center since 1945. This number totalled 153 mothers, and it was found on the children of those mothers on which we were able to obtain blood tests that no symptoms of congenital syphilis were reported.

The general program of the Venereal Disease Division has been very similar to the past three years, and by case-finding publicity, and education we have attempted to keep the State as a whole alert to the serious consequences of venereal disease.

During 1950 progress in the program for the impounding of surface waters has necessitated considerable work by the Division of Laboratories on streams and other surface waters. Thousands of chemical analyses have been made to determine type and degree of pollution and those other qualities of waters that might predispose to nuisance conditions. Studies of microscopic plant and animal life of such waters in several parts of the state are under way. In advanced planning stage is a project for determining disease hazards incident to irrigation practices.

A report of hospital construction in Nebraska for the period subsequent to World War II ending June 30, 1950, has just been issued.

The main value of this report is in demonstrating by diagram and picture what is characteristic of a modern hospital in appearance, functional arrangement of areas, and as to cost. The technical services required by present day hospital care and medical service demand the most careful planning and constant attention to the most minute detail for operation of the hospital.

The report is both interesting and informative.

KNOW YOUR BLUE SHIELD PLAN

A number of physicians and Blue Shield members have requested a complete summary of the increases provided by the new membership agreement. A full listing of the specific increases and additions to the Schedule of Benefits, which will apply to all members who have received their new agreements and have paid dues at the new rate, is published below:

IN-HOSPITAL MEDICAL CARE BENEFITS INCREASED

Number of days is increased from 30 to 70 days per admission, and the amount of payment is increased from $3 to $4 per day.

BENEFITS FOR THESE PROCEDURES ARE INCREASED:

Retina, detachment of, one or more stages, from	$100 to $200
Strabismus, from	$75 to $100
Tarsorrhaphy orbicularis paralysis, from	$30 to $50
Esophagal diverticulum, one or two stages, from	$100 to $200
Foreign body in eye, simple removal, from	$2 to $3
Radical removal of breast	$125 to $150
Resection of intestines, individual consideration	$125 to $200
Electrocardiograph, from	$5 to $7.50

Benefits for Following—Increased from $150 to $200:

Gastrectomy, sub-total	$200
Gastrectomy, total	$200
Lobectomy, or pneumonectomy	$200
Thoracoplasty (complete)	$200
Heart and Great Blood Vessels	$200
Colon resection (with or without colostomy)	$200
Carcinoma of colon-recto-sigmoid, combined abdominal-perineal resection	$200
Laryngectomy	$200
Brain tumors, craniotomy and removal	$200
Brain abcess, craniotomy and drainage	$200
Spinal cord tumors, other than ruptured intervertebral disc, removal of	$200
Complete proctectomy	$200

Benefits for the Following Have Been Added:

Cystectomy	$200
Radiation treatment for larynx and pharynx	$200
Fenestration of semicircular canals	$200
Ligation of ductus arteriosus	$200
Cornea, suture of	$50
Eyelid, suture of (O.T.P.)	$5 to $15
Sclera, suture of	$15 to $50
Hordeolum, or style operation (O.T.P.)	$5
Lacrymal duct, dilation of (O.T.P.)	$5
Tonsil tags, excision of (O.T.P.)	$20
Resection of lip for malignant lesion	$50
Malar, simple non-depressed fracture, closed	$37.50
Simple fracture Zygoma	$37.50
Hemangioma, radiation treatment, each treatment	$10

The number of procedures for which office treatment is permissible has been increased from 66 to 107.

Benefits are now provided for care of fractures of maxilla and mandible by doctors of dental surgery.

It should be kept in mind that the benefits of the new certificate will be available to the majority of members at once, but those members who are not yet paying the new rate, will receive the benefits of the earlier schedule until the conversion of their membership is made.

Buy U.S. Saving Bonds

Meeting Announcements

The American College of Allergists will hold its seventh annual meeting at the Edgewater Beach Hotel, Chicago, Illinois, February 12-13-14, 1950. This year the College is trying for the first time the experiment of offering its post collegiate instructional course on the three days just preceding its annual conclave. This course has been arranged with the thought in mind that 10% or more of all the patients in a physician's practice have an allergic component in their complaint. For further information and registration write Fred Wittich, M.D., Secretary-Treasurer, American College of Allergists, LaSalle Medical Building, Minneapolis, Minnesota.

The Third Western Institute on Epilepsy will be held in Salt Lake City, Utah, the weekend of June 15 to 17, 1951. This meeting will be of wide interest to physicians, social workers, public health nurses, employers, teachers, rehabilitation workers, state hospital personnel, educational leaders, etc. A small registration fee will be required.

Further information may be obtained by writing to Dr. Harriot Hunter, 4200 East 9th Avenue, Denver, Colorado, or Dr. Jean P. Davis, University of Utah College of Medicine, Salt Lake City, Utah.

The twenty-fourth annual meeting of the National Conference on Medical Services will be held Sunday, February 11, 1951, in the Red Lacquer room of the Palmer House in Chicago.

POSTGRADUATE CONVENTION OF COLLEGE OF MEDICAL EVANGELISTS TO BE HELD MARCH 11-16

Diagnosis, Management, and What's New will be the theme of the annual Postgraduate Convention of the College of Medical Evangelists School of Medicine, to be held at the Biltmore Hotel, Los Angeles, March 11-16. The six-day medical convention is especially geared to the needs of the general practitioner. Many eminent medical speakers will bring practical and comprehensive syntheses of latest advances in medicine which can be put to immediate use. This program has been planned by a committee consisting of both general practitioners and medical school faculty.

The American Congress of Physical Medicine will hold its twenty-ninth annual scientific and clinical session September 4, 5, 6, 7 and 8, 1951, inclusive, at the Shirley-Savoy Hotel, Denver, Colorado. Scientific and clinical sessions will be given on the days of September 4, 5, 6, 7 and 8, 1951. All sessions will be open to physicians and other professional personnel. Full information may be obtained by writing to the American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2, Illinois.

The postgraduate Winter Clinics are to be held at the Shirley-Savoy Hotel, Denver, Colorado, Febr. 20-23, inclusive, and on the 21st of February a "Nebraska dinner" will be held at the Shirley-Savoy for Nebraska alumni.

COMMUNICATION

To the Editor:

A letter in my possession, written by Dr. J. A. Reed, Secretary of the American Diabetes Association, and chairman of its committee on Diabetes Detection, comments on the November 1950 issue of our Journal as follows: "the copy . . . entitled Diabetes Number has reached my desk. First in general, I would like to comment on your nice Journal other than the fact that you have rendered a magnificent service to diabetes detection.

"I would like to take this opportunity to thank you and your staff for the splendid manner in which you presented diabetes to the membership of your state society. Mr. J. Richard Connelly, the Executive Director, and myself have discussed the possibiitiles of asking the state medical journals to follow the example set forth by yourself."

In my opinion this statement constitutes a deserved tribute to the Journal and to you as its editor, and is worthy of being called to the attention of our membership. I wish to add my personal thanks for your progressiveness and fine spirit of cooperation in launching this issue at the request of our committee.

Sincerely yours,

M. MARGOLIN, M.D.,
Chairman,
Diabetes Committee.

THE UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE ALUMNI ASSOCIATION

Dear Alumnus:

The University Hospital is the laboratory for clinical teaching. To adequately prepare trained physicians, hospital facilites must be mantained and actually expanded. The cost of maintaining the hospital is subject to the same increases that you and everyone else are experiencing, with rising prices like food and supplies and the necessity of meeting higher wages on all levels, janitors, engineers, nurses, technicians, staff. Since we are still in a free economy, we are in active competition with openings at all of these levels, not only locally, but in other parts of the country.

By the nature of the admission policy of the University Hospital requiring reference by the home physician and certification by a county official of charity status, and the policy of accepting those patients who will be the best teaching material, the University Hospital patients represent an unusually high proportion of "problem" cases. These require a more extensive work-up with higher costs for the greater amount of laboratory, x-ray and similar special studies for evaluation.

Medical science and skill is constantly expanding. New methods and techniques are developed, often and trained personnel. Failure to provide these services deprives the student of the opportunity of training comparable to that offered in other Universities. It deprives patients of the best care and treatment that is possibly available. Similar restrictions in other departments mean that the University of Nebraska is not able to maintain a standing among the constantly advancing schools of higher learning.

The teaching in the Basic Science departments is also undergoing constant revision. The new ideas appearing and being developed in all fields requires explanation in these developmental and background courses. Virus diseases, as an example, require a new set of exercises and materials. Improvement of the understanding of mineral and water metabolism have resulted in modification of teaching in Biochemistry and Physiology. Equipment and supplies are different and more expensive than a few years ago. Similar examples can be cited in all departments.

University authorities, after careful consideration of requirements have requested $2,600,310.00 for the College of Medicine, as a part of the total University budget of $14,080,000.00, as the amount needed and which can be economically and justifiably used in the next two years for the maintainance and development of University functions.

We hope that you will think seriously of these problems of your school, and discuss these ideas with your friends.

EUGENE E. SIMMONS, M.D., President.

SOCIETIES

Secretaries of county and district societies are requested to send in the minutes of their meetings to The Editor, Mezzanine No. 3, Medical Arts Building, Omaha.

Members of the Eleventh Councilor District met at Tuckers Cafe, North Platte, Wednesday, December 6, 1950 for dinner and a business meeting. Presiding was Councilor F. M. Bell of Grant, Nebraska. Officers elected for the coming year were President, Dr. E. A. Harvey, Ogallala; Vice President, Dr. H. E. Moore, Sutherland; Secretary-Treasurer, Dr. G. M. Horner, Ogallala. Guest speakers were Dr. John Thomas, Pediatrician, Omaha, and Dr. Walter Cotton, Obstetrician and Gynecologist, Omaha. Dr. Thomas discussed (1) Care of the Premature Infant; (2) Resuscitation of the Asphyxiated Newborn; (3) Erythroblastosis. Dr. Cotton commented on Erythroblastosis As It Pertains to the Obstetrical Field and discussed Vaginal Bleeding, stressing the importance of early cancer detection.

The program was organized by the Department of Obstetrics and Pediatrics under the sponsorship of the NCH Division of the Nebraska Department of Health.

The Scotts Bluff County Medical Society met at the Country club with the auxiliary Friday night, December 15, and elected the following officers. Dr. C. N. Sorenson, Scottsbluff, president; Dr. L. J. Gridley, Scottsbluff, vice president; Dr. J. P. Heinke, Scottsbluff, secretary; Dr. Kenneth Ohme, Mitchell, delegate.

Dr. H. S. Morgan was named president-elect at a meeting of the Lancaster county medical society Tuesday night, December 19, 1950.

Dr. Reed succeeds Dr. Fred D. Coleman in the presidency. Dr. John A. Brown was elected secretary-treasurer. Elected to the board of trustees were Dr. Coleman and Dr. Frank Tanner.

Members of the Third Councilor District of the Nebraska Medical Society held their semi-annual meeting in the Paddock hotel, December 11, 1950.

About 20 doctors from Richardson, Johnson, Pawnee, Gage and Nemaha counties were present.

The meeting was addressed by Dr. Lester Odell and Dr. George Robertson of the University of Nebraska College of Medicine, sponsored by the Division of MCH of the Nebraska Department of Health.

DEATHS

George P. Pratt, M.D., Omaha. Born in Lincoln in 1888. Graduated from Rush Medical College in 1913. Located in Omaha in 1915. Dr. Pratt was on the staffs of several hospitals in Omaha and from the time of his arrival until his death he was connected with the faculty of the University of Nebraska College of Medicine. In 1942 he was appointed full professor and in 1947 he was made professor emeritus. Dr. Pratt was well known throughout this area and enjoyed an excellent reputation. He became ill with cerebral thrombosis about five years ago and lingered until December 19, when he died in an Omaha hospital. Surviving is a son, Dr. Peyton Pratt of Omaha.

David T. Martyn, Jr., Columbus. Born in Columbus in 1878. Graduated from Creighton University School of Medicine in 1900. Following graduation he took a post graduate course in Chicago and returned to Columbus in 1902 where he started to practice medicine. During his life time he was active in civic and professional circles. He was a member of the Nebraska State Medical Association and a fellow in the American College of Surgeons. He took a great interest in fraternal organizations having been a charter member of the Elks lodge and a member of the Masons. Died November 24th at St. Joseph's hospital in Omaha. Surviving are three daughters.

Victor Anderson, M.D., Bridgeport. Born in Sweden in 1867. Graduated from the Medical College of Kansas City, Missouri in 1887. Following graduation he became connected with the Wabash Railway. In the early 90's he came to Nebraska where he located in Deweese. In 1902 he moved to Bridgeport where he remained in the practice until the time of his death December 27, 1950.

Dr. H. H. Humphrey, Daykin. Born in Jefferson County in 1888. Graduated from the University of Nebraska and from Cotner Medical College in 1913. Following post graduate work in Washington University in St. Louis he came to Daykin where he enjoyed a large practice for many years. In 1938 Dr. and Mrs. Humphrey were honored by a community reception and in 1948 the town of Daykin observed Dr. Humphrey day to celebrate the 31st anniversary of the doctor's practice. Dr. Humphrey was a civic leader in the community with a great interest in professional affairs and church and fraternal organizations. Died in his office December 21, 1951. Surviving are his wife and three daughters.

Dr. Frank H. Morrow, Columbus. Born in 1880. Graduated from the University of Nebraska College of Medicine in 1905. Located in Columbus forty years ago and remained there until the time of his death except for a period as a Captain in World War I. Surviving are his wife and five sons.

HUMAN INTEREST TALES

Communications bearing human appeal are solicited. They should be addressed to The Editor, Nebraska State Medical Journal, 111 So. 39th, Omaha.

Dr. W. W. Davis, formerly of Omaha, has gone to California.

Dr. F. J. Clark, formerly of Stuart, has located in Gregory.

A new arrival in Fullerton is Dr. A. Montero, formerly of Watertown, S.D.

Newly appointed to the post of city physician is W. R. Newmarker of Columbus.

Newly commissioned lieutenant (jg) in the USNR is Dr. Robert C. Calkins of Beatrice.

Dr. C. F. Brannen of Greeley is a liteutenant jg in the USNR stationed at Great Lakes.

Dr. George N. Johnson of Omaha recently received his certification by the American Board of Surgery.

Dr. Whitney Kelly of Omaha is the newly elected president of the Iowa-Nebraska State Neuropsychiatric Society.

Dr. Owen L. Slaughter of Evansville, Ind., a Norfolk product, has accepted a commission in the U.S. Air Force.

Dr. Donald V. Hirst, formerly of North Platte has become associated with Dr. Robert Collins at Council Bluffs, Iowa.

A certificate of merit was presented by the Cozad Chamber of Commerce to Dr. C. H. Sheets, president of the Nebraska State Medical Association in December.

According to press reports Dr. G. A. Heath of Fairbury has retired from active practice. Dr. Heath has been in Jefferson County since 1897 and in Fairbury since 1907

It is reported that Capt. H. A. Galloway of Lincoln was wounded in fighting in Korea. Dr. Galloway was on the Walter Reed hospital staff in Washington prior to entering service.

The new medical director of the Red Cross Regional Blood Center is Dr. Robert M. Joyer with offices in Omaha. Dr. Joyer is a graduate of the University of Minnesota Medical School.

Commanding a mobile surgical hospital in Korea, is Dr. James M. Brown of Omaha who recently has been promoted to the rank of Lieutenant Colonel, MC. Colonel Brown is a graduate of the University of Nebraska College of Medicine and for a while prior to re-enlisting he practiced at Clarkson, Nebr.

DUES

Annual dues to the Nebraska State Medical Association and the AMA become delinquent February 1. If you have not yet paid your dues for 1951 please send the check to your local secretary NOW.

COMMISSION ON CHRONIC ILLNESS

What is known today about preventing cancer? heart disease? diabetes?

What can be done to find more cases of these and the other chronic diseases in early and more controllable stages?

Over twenty national health organizations are now participating in the preparation of authoritative summaries of what is now known about prevention and early detection of arthritis and rheumatism, heart disease, cancer, poliomyelitis, multiple sclerosis, cerebral palsy, epilepsy, diabetes, blindness, deafness, tuberculosis, and syphilis.

Statements are also being prepared on emotional disorders, heredity, occupation and malnutrition as they may be related to the causation of chronic disease.

These statements will be used at the National Conference on Chronic Disease: Preventive Aspects, March 12-14, 1951, at the Edgewater Beach Hotel in Chicago, announced Morton L. Levin, M.D., Director of the National Commission on Chronic Illness.

Evidence gained in a study of far advanced cancer patients by three Chicago doctors indicates that treatment with ACTH and cortisone is helpful in reducing the pain and other complications of the disease but does not materially alter the natural course of the disease.

Drs. Samuel G. Taylor III, John P. Ayer and Roger S. Morris Jr., reported on their study of 26 advanced cancer patients in the November 25 Journal of the American Medical Association. All three doctors are associated with the Presbyterian Hospital, Chicago.

The report says in part:

"The clinical response of most patients was reduction in fever, if present, increased appetite and improved strength and well-being. At times the effects were dramatic and appeared usually within 48 hours after ACTH therapy and within four to six days after starting treatment with cortisone.

"Patients hitherto bedridden, vomiting and requiring heavy doses of narcotics were able to become ambulatory, reduce or stop their reliance on narcotics, and eat astonishing meals."

According to the report, however, the "improved" condition of the patients was only temporary. The natural course of the disease continued—12 of the patients already have died. In addition, the hormone treatment produced disturbing side effects.

"We have frequently been faced with the problem," the doctors explained, "whether complications produced by continued therapy or relapse from omission caused more distress to the patient."

The Nebraska State Medical Journal

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

Vol. 36 Norfolk, Nebraska, March, 1951 No. 3

EDITORIAL

The Petrow report, recently featured in a series of articles in the Omaha World-Herald cannot be dismissed without comment. The report, based on an investigation some two years ago by Mr. Chris J. Petrow, an administrative assistant to Governor Peterson, was submitted in confidence to the Governor. That an investigation was made is a credit to Mr. Peterson. As the Chief of State he has the right, indeed the duty, to gather facts and data on the various departments and agencies concerned with carrying on the functions of government. How the document was made public two years after its submittal, and how much of it was published we do not know. If what we read constitutes the entire report, and if conditions in the Department of Health are now as described in the World-Herald it appears to us that the newspaper could render a most valuable service to the people of Nebraska through a campaign for reorganization of the entire Department.

In fairness, however, it should be pointed out that regardless of the criticism of the Petrow report, progress has been made in public health over the past few years, though admittedly it has been discouragingly slow. This creeping pace, we contend, has been due not to the "inefficiencies, duplication and waste" but to the budgetary inadequacies with which the department has been struggling over the years. Substandard salaries, shortage of personnel and limited authority on the task assigned are not conducive to progress in any field. In public health it means retrogression.

The use of federal funds has always been a sensitive topic for discussion in Nebraska as in a good many other states. There is red tape, we understand, in the procurement of these funds, and when made available they are untouchable except as earmarked for specific use. Let it be remembered, therefore, that "the confusion" if it really exists is inherent in the control of the system and not necessarily in the administration of the numerous local divisions to which these moneys are assigned. We need not go into the question of the desirability or necessity for federal aid in Nebraska. As we see it, if our per capita expenditure for public health is twelve cents per annum the answer is readily apparent. Until Nebraska decides to spend its own money the problem will remain not how little federal support we can get by on, but how much more we can obtain to accelerate our expansion in necessary public health facilities.

In publishing the report the World-Herald has assumed a self-imposed challenge and a responsibility to the people of Nebraska. It must be presumed that the criticisms emphasized in its pages was brought to public attention for the purpose of stirring up popular interest with resulting demands for improvement in the Health Department. As physicians we will watch with eagerness the follow-up of this important project. Needless to say, whatever assistance we may be in position to supply will be given cheerfully. As an initial and unsolicited contribution we suggest that the World-Herald move in on the gentlemen in our Capitol who leave nothing undone in their effort to convince our legislators that saving a few devaluated dollars in State taxes is more important than preserving the health of our citizens. The doctors, too, are conscious of high taxes and the high cost of government and the high cost of everything that goes into modern living, but we are also appreciative of the fact that it is poor economics to cut too many corners on expenditures for health. The people of Nebraska can support a good health department.

The Management of Causalgia*

LOUIS G. HERRMANN, M.D.
From the Department of Surgery of the College of Medicine,
University of Cincinnati and the Cincinnati General Hospital
Cincinnati, Ohio

The mechanism of the production of painful syndromes has excited the interest of neurologists, psychiatrists, and surgeons ever since Civil War days when Wier Mitchell, Morehouse and Keen(1) drew attention to the peculiar "burning pain" which developed in the extremities of soldiers who had received gunshot injuries to large nerves. They suggested the term "causalgia," which means burning pain, to describe this painful state.

Livingston(2) is convinced that Wier Mitchell had the symptom of burning pain in mind and was not using the term "causalgia" to designate a definite clinical syndrone. However, most observers today use the term "causalgia" to mean a syndrome characterized by (1) burning pain, (2) trophic changes of the skin, and (3) local hyperthermia. We agree with Livingston that this all inclusive use of the term "causalgia" is unfortunate since the presence of all these signs and symptoms in one patient is extremely rare. Since these signs and symptoms occur in variable combinations, most of us believe that it is a misleading and artificial distinction to select any three of them and designate them as a clinical entity.

Many physicians and surgeons have gotten the impression that these painful syndromes are self-limited and that after a period of months the symptoms gradually disappear. Pollock and Davis(3) have expressed the view that the condition reaches its height in four or five months after injury and then tends to disappear slowly. Such an attitude might encourage the general physician or surgeon to adopt a policy of delaying active or definitive treatment. In our experience, this waiting policy has led to serious complications.

The damage which takes place during even a relatively short period of delay may result in irreversible changes. The skin becomes congested and glossy, the muscles undergo atrophy or replacement by fibrous tissue, and the bones lose their form. The skin and subcutaneous tissues fuse and the small joints become fixed while the fingers become thin and tapered. The aching pain or hyperesthesia of the skin may be so severe that the patient will not permit passive motion or physiotherapy. Local application of heat aggravates the pain and the patient finds it difficult to place the extremity in a comfortable position. In many instances, by the time something is done to lessen the pain, the damage to the soft tissues is so extensive and far advanced that no form of treatment will ever restore normal function.

The alterations in emotional stability and even in personality, which the agonizing severity and unrelenting constancy of the pain brings about, are not the least important of the permanent changes which may remain even after the burden of pain has been lifted.

We should all concern ourselves with this large group of patients whose complaints may have a real organic basis but whose physical signs are not sufficiently clear to make this fact self-evident. It is this group of patients who are so frequently misunderstood, discredited, and accused of malingering. They are also the ones who are in danger of mismanagement or gross neglect long enough to permit the underlying disturbance of function to become permanently fixed. It is quite possible that persons of a peculiar temperament may develop these painful syndromes more often than other people, but we believe sufficient evidence has been produced by Livingston and others to make us suspect that the underlying cause is directly related to the degree and kind of chronic irritation of peripheral sensory nerves. When one carefully studies a large group of patients with these painful phenomena, one is struck by the fact that they vary widely in their clinical signs and symptoms, but on more careful analysis we usually find that the disturbances in the vasomotor or vasotrophic functions of the part are similar for each group. Much of the confusion which exists today in the minds of most practitioners of medicine or surgery is due to the great number of specific names which have been applied to relatively the same pathologico-physiologic disturbance.

Homans(4) has suggested the term "minor causalgias" for the less severe types of nerve irritation. This connotation has some advantages even though we know there are types of nerve irritation which produce trophic changes in soft tissues and bones with aching or boring pain rather than burning pain. In our clinic we have always referred to this latter condition as post-traumatic painful osteoporosis but Livingston(2) classifies it in a larger group which he calls post-traumatic painful syndromes.

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*Work made possible by a grant from the Lucie Rawson Scientific Fund. Presented by Dewey Bisgard, M.D., of Omaha, at the annual meeting of the Omaha Mid-West Clinical Society on October 25, 1949.

In order to bring some order to this presentation, I shall discuss these painful syndromes under three main headings: namely, (1) minor causalgias, (2) post-traumatic painful syndromes, and (3) phantom limb pain. We do not believe they represent specific clinical entities but such a grouping will permit a better discussion of our present day therapy of these difficult problems.

MINOR CASUALGIAS

When the offending area can be accurately located, the simplest method of treatment consists of surgical excision of the damaged tissue and, if this can be carried out early in the course of the syndrome, complete and lasting relief usually results. It is our recommendation, however, that before the local excision of the so-called "trigger area" is carried out, or before any surgical procedure upon the sympathetic nerves is undertaken, it is important to study the effects of blocking the "trigger area" or the regional sympathetic ganglia with a 2 per cent solution of novocain. In our experience, novocainization of the "trigger area" has given lasting relief of the hyperesthesia as well as relief of the pain in the entire extremity in many such cases. The motility of the joints of the affected extremity frequently improves immediately and there is demonstrable increase in the strength of the muscles following such a simple procedure. Such signs of improvement may last for only a few hours to be followed by recurrence of the painful syndrome, either in its original severity or even temporarily aggravated. It is a common observation, however, that the painful syndromes do not always recur as soon as local effect of the novocain has worn off. Many patients with minor causalgias have experienced relief of pain for days or weeks and some have even gotten permanent relief after a single novocain block of the "trigger area." It has been necessary in some instances to repeat the novocanization of the "trigger area" several times at intervals of two or three days in order to get lasting relief of the painful syndrome.

When the painful symptoms develop following the partial amputation of a digit, only rarely has the pain been relieved by an amputation of the part at a more central (higher) level.

Tetra-ethyl-ammonium chloride has been suggested as a means of blocking both the sympathetic and parasympathetic parts of the autonomic nervous system. Forsyth(5) and his co-workers believe that its action in the minor causalgias is to interrupt temporarily the sympathetic reflex and to prevent the constant bombardment of the painful impulses from being transmitted to the spinal cord. They believe that repeated temporary interruption of the reflexes results in permanent block of the flow of these abberrant impulses in the same manner as is accomplished by novocainization of the regional sympathetic ganglia. We have not observed the same striking benefits in the management of the minor causalgias with tetraethyl-ammonium chloride as we have seen after the novocanization of the regional sympathetic ganglia.

DeTakats(6) has shown that it is most satisfactory to aim the therapy of causalgia at the particular sensory level which appears to be involved. Thus, in early cases, infiltration of novocain into the "trigger points" would represent an attack upon the first neuron level. Interruption of the sympathetic reflex arc by novocainization of the regional sympathetic ganglia would represent therapy directed toward the second neuron level. Sympathetic ramisection or ganglionectomy should be used when novocainization of these regions gives temporary but not permanent relief. Posterior rhizotomy and cordotomy are also therapeutic attacks upon the first and second neuron levels respectively and have been used successfully when all other more conservative measures have failed to bring about permanent relief of pain. When the disturbance of nerve function reaches the third neuron level, removal of the part of the cerebral cortex which represents the sensory pathways from the painful area, or a prefrontal lobotomy, becomes necessary to give lasting relief.

When the syndrome involves the lower extremity, most observers are agreed that it is best to excise the second and third lumbar sympathetic ganglia and very often the first lumbar ganglion as well. In male patients, the motor fibers to the prostate gland course through the first lumbar ganglia and ablation of both first lumbar ganglia abolishes the power of forceful ejaculation of semen.

For conditions involving the upper extremity, the success of the surgical attack is less definitely agreed upon. Ramisection of the second and third thoracic sympathetic ganglia is the least extensive sympathectomy which will give lasting sympathetic denervation of the upper extremity. In most of the painful syndromes, however, we are not always concerned about the permanency of the interruption of the sympathetic pathways, for statistics show that any procedure which interrupts the vasomotor nerve to the part for a reasonable length of time has a good chance of being successful.

POST-TRAUMATIC PAIN SYNDROMES

Livingston(2) suggests that cases classified as "post-traumatic pain syndromes" should include those in which the symptom complex is characterized by severe pain and protracted disability following an apparently minor injury. Except for the fact that the pain is not burning in character, as the term "causalgia" implies, they seem to be identical in type with the "minor causalgias." These cases are the most numerous in clinical practice and we believe they are the most important representatives of that group of painful syndromes which are usually attributed to chronic irritation of sensory nerve fibers.

These disturbances do not usually conform to any definite peripheral nerve pattern and the coldness, cyanosis, and edema could be ascribed to immobilization of the part in the pendent position. Weakness of the muscles seems inconsistent with the degree of atrophy and the physical condition of the musculature. So often these patients show other signs of nervousness, excessive sweating, tremor, and increased pulse rate, so it is not unusual to ascribe the condition to a psychoneurosis.

We have been interested in one particular type of post-traumatic pain syndrome which we have referred to as "post-traumatic painful osteoporosis." The importance of post-traumatic painful osteoporosis as a major cause for prolonged loss of function or severe aching pain after trivial, as well as serious, injury to an extremity is not generally recognized. Many innocent persons are unjustly accused of malingering or of being grossly uncooperative simply because their disability continues long after the effects of the original trauma have subsided or after the broken bones have had a chance to become firmly united in good position.

The early recognition of the characteristic roentgenologic changes in the small bones of the affected extremity is absolutely essential if the period of disability is to be favorably influenced by active therapy. A long period of disability is a great economic loss to the patient as well as to his employer.

CLINICAL ASPECTS

Post-traumatic osteoporosis is always characterized by (a) partial loss of motor function of the affected part, (b) mild vasomotor changes in the affected extremity, (c) spotty demineralization of the bones near the site of trauma, and (d) mild to severe aching pain in the extremity. The disturbances of function are always more extensive than can be explained on the basis of the trauma alone and the aching pain in the extremity is greatly out of proportion to the local signs of damage to the tissues. We usually divide the cases of acute painful osteoporosis into two clinical groups as follows:

Group 1. Painful osteoporosis which follows slight or moderate trauma to one of the polyarticular regions, wrist or ankle. The osteoporosis comes on gradually over a period of three or four weeks and the patient develops edema of the extremity and pain on movement of the joints. Little or no importance is usually attached to the original trauma. The limitation of motion in the neighboring joints rapidly becomes the outstanding symptom and with this increase in functional disability further immobilization of the part increases the pain. The spotty demineralization of all the small bones of the affected extremity is characteristic of the destructive phase of the disturbance.

Group 2. In this group we usually place those patients in whom the osteoporosis follows an injury to the articular or periarticular tissues when the injury is of sufficient magnitude to cause fracture of one or more of the bones of that extremity. In these patients the trauma is usually considered the major cause for the pain as well as the local vasomotor changes.

We believe that any patient whose pain is not relieved by proper reduction of the fractured bones with satisfactory immobilization of the injured part should be examined regularly. Roentgenograms should be made at intervals of about two weeks and carefully studied for the pathognomonic signs of true osteoporosis. We have found that it is important to have the normal hand or foot on the same roentgenogram so accurate comparison of the structure of the bones can be made.

TREATMENT

The treatment of post-traumatic osteoporosis has, until recently, been symptomatic and preventive rather than curative in nature. Sudeck(7) recommended minimum immobilization followed by active movement for most of his cases. In 1926, Noble and Hauser(8) recommended heat to the point of tolerance either in the form of radiant heat or paraffin baths. Forceful manipulation under anesthesia is definitely contraindicated. Any form of fixation with plaster casts or orthopedic apparatus causes increased pain to the patient.

In 1924, Heyman(9) suggested periarterial sympathectomy for the treatment of painful osteoporosis. He reported prompt relief of pain and restoration of function following the operation.

Our own clinical studies(10) have convinced us that the course of post-traumatic painful osteoporosis can be greatly shortened and most of the serious complications avoided if the disease is treated surgically by thorough denudation of the main artery to the affected extremity (periarterial sympathectomy) during the acute or destructive phase of the disturbance. There is some difference of opinion relative to function of the nerves which course along major arteries. It has been established that some of the fibers are distributed to the periarterial network in a segmental manner. Most observers believe these fibers carry impulses which control the vasomotor function. We believe these impulses might also have a neurotrophic function and the osseous changes which result are dynamic in character rather than the result of vasomotor changes.

PHANTOM LIMB PAIN

The last of the causalgic states I wish to discuss is phantom limb pain, the most complicated and the least understood of the entire group. In spite of many therapeutic triumphs during World War II in young men with gunshot injuries to large nerves, the therapy of phantom limb pain in the elderly person whose extremity was removed because of extensive gangrene is still far from satisfactory.

Most patients continue to "feel" their diseased or badly injured extremity after it has been removed surgically. This phantom limb sensation may be present only for a brief period and usually is not painful. Phantom limb sensation of this variety usually disappears after the patient begins to wear an artificial extremity.

In some patients, however, these sensations may take the form of severe burning or boring pain and the victims may even complain that the distal parts of the extremity are being constricted or compressed. They may also complain that a specific pain, which was present in the fingers or toes before amputation, persists unchanged in the phantom limb. Because of the great variation in the intensity of phantom limb sensations and the location or character of the pain, these patients usually do not receive serious consideration and the surgeon frequently assumes that they suffer from some form of psychoneurosis.

In favor of a central origin of these sensations, particularly that the symptoms may represent an obsession neurosis, are the observations that no peripheral end-organs can account for the sensory impressions of posture, touch, and movement. The patient usually feels most vividly the parts of the limb which have the greatest representation in the cerebral cortex, especially the hand, index finger, toes, and foot. Most patients report the phantom limb to be frozen in one position, usually one which corresponds to that position in which the injured limb was last seen by the patient. Nervousness and emotional instability, which may be evident by the time the patient comes under observation in his quest for relief of pain, are thought to indicate a temperament which favors the development of an obsession neurosis.

From a clinical standpoint no one could object to any of these observations, but when they are used to exclude the possibility that peripheral irritation can be playing a part in the causation of the phantom limb pain and to prove the pure psychic origin of this condition, we must agree with Livingston(2) that the evidence is inconclusive. Our own observations(11) support Livingston's contention that peripheral irritation, while by no means constituting the whole story, does represent an important factor in the production of the syndrome of phantom limb pain.

It is usually emphasized by those who favor the central origin of the disturbance that if the syndrome came as a result of peripheral irritation, the excision of the neuroma or a reamputation should cause the symptoms to disappear. It is the experience of most surgeons that such operative procedures usually fail to give lasting relief. Recent studies, however, seem to indicate that abnormal reflexes from the periphery to the higher centers of the central nervous system tend to become fixed or irreversible within a short time after injury, and that the subsequent removal of the original site of irritation does not always completely abolish these abnormal reflexes.

We are of the opinion that the most probable primary cause of the phantom limb sensations or pain is irritation of centrally conducting axones within a neuroma or at the proximal end of a freshly cut mixed nerve. These axones formerly brought impulses to the higher centers from the part which has been removed. It is not necessary for such irritation to persist since the abnormal reflexes within the spinal cord which it provokes may cause the sensations or pain to continue even after all known afferent pathways from the extremity have been severed.

We began our study(11) of phantom limb pain twelve years ago with the primary object of preventing the irritation of afferent pathways in the mixed nerves of the extremity at the time of amputation and during the immediate postoperative period by preventing abnormal scar tissue formation or the formation of neuromas at the site of division of the large nerve trunks. It is generally agreed that the simple formation of a neuroma on a large nerve is in itself not always provocation of painful sensations. All patients with phantom limb pain upon whom we have performed secondary operations on the stump, or when we have had the occasion to study the nerves at autopsy, have shown either abnormal scar tissue formation about the nerve, neuroma formation on the proximal end of the cut nerve, or local inflammatory changes about the end of the large nerve trunks.

Boldrey(12) revived interest in this phase of the problem and presented his own method of preventing the formation of large neuromas on the ends of major nerve trunks by inserting the end of the cut nerve into the adjacent bone. His excellent summary of the other methods for treating the nerves at the time of amputation should be read by all who are interested in this problem.

Our interest centers around the simplest and most physiologic method of preventing regeneration of axones from the cut end of a large nerve by placing a non-absorbable ligature tightly around the uninjured nerve trunk, about an inch above the site of amputation. Such a ligature will always control the bleeding from the nutrient artery of the large nerve and it causes a narrow line of pressure necrosis of the nerve tissue immediately beneath the ligature. The regeneration of axones is prevented by the occlusion of the neurilemma sheathes; first by the ligature itself and later by the ingrowth of fibrous tissue. Histologic studies made upon large nerves treated in this manner show a gradual replacement of the area of pressure necrosis by fibrous tissue until finally, after about one month, the epineurium completely encases the end of the nerve, except for a small area of dense fibrous tissue at the extreme end.

This problem of the healing of large nerves after various methods of treatment has been studied in our laboratories by Schnug. He found that if the large nerve was crushed before the non-absorbable ligature was applied, the neurilemma sheathes were invariably ruptured and neuromas developed in spite of the ligature. Ligatures of absorbable material were found to loosen or disintegrate before complete healing of the end of the nerve had taken place and it was his conclusion that such material should not be used to ligate large nerves at the time of amputation.

Severe crushing injuries and extensive arterial occlusion due to primary or secondary arterial thrombosis gives the greatest incidence of phantom limb pain. The average incidence of phantom limb pain in our series of 120 patients who survived amputation of an extremity and who were followed for an adequate period of time was only 5.8 per cent, while the usual incidence of phantom limb pain in such patients varies from 15 to 86 per cent, depending upon the length of time the pain had existed before the amputation was carried out.

CONCLUSION

The various forms of causalgia still present a challange to the skill and ingenuity of all of us. Prolonged disability and suffering may follow even trivial injuries to large nerves or to multi-articular joints.

All painful syndrones must be recognized early and active treatment instituted before extensive structural or trophic changes have taken place in the bones and soft tissues of the affected extremity.

The methods of treatment which I have described must be considered as adjuvants in the management of these bizarre conditions and final definitive treatment can only come as the result of a complete understanding of the pathologic physiology of these painful syndromes.

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Endometriosis*

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Endometriosis is characterized by the presence of ectopically located endometrium. When such endometrium is found within the uterine wall, it is spoken of as internal endometriosis or adenomyosis. It may also be found upon the surface of the uterus, tubes, and ovaries and adjacent peritoneal surfaces when it is spoken of as external endometriosis. Additional sites of external endometriosis may be farther removed from the uterus and include the occurrence of such tissue in lararotomy scars, in the region of the umbilicus, the inguinal canals, the vulva, and occasionally within the vagina and upon the vaginal face of the cervix. Endometriosis is limited to the potentially reproductive age period and is more frequently encountered in the age group between 25 years and the climateric. Many instances of endometriosis are asymptomatic and represent diagnoses which are made incidental to other pelvic pathology. The frequency with which the diagnosis is made depends upon the thoroughness of microscopic examination of suspected tissue. Where such lesions are carefully removed and separately submitted to the laboratory for study, Meigs states that as high as 35% of laparotomies for pelvic disease will show endometriosis.

The microscopic lesion is characteristic and consists of the combination of endometrial stroma surrounding gland spaces like those encountered in the normally located endometrium. The endometrial glands may show a variety of patterns typical of those seen in the normally located endometrium both physiologic in their appearance and demonstrating any of the variations from normal which are seen in endometrium.

Novak and Alves DeLima point out that there is no consistent relationship between the microscopic appearance of the endometrium in islands of endometriosis and the normally located endometrium in the same patient.

Proliferative endometrium and varying degrees of cystic glandular hyperplasia of the endometrium are more frequently encountered than is the progestational pattern. All varieties of endometrium may be the source of bleeding into the ectopic islands and this occurrence is responsible for many of the symptoms associated with endometriosis. These islands show varying degrees of an invasive tendency and may be superficially located with little adjacent connective tissue reaction or they may be extremely invasive with large amounts of surrounding reaction. Penetration into surrounding organs may be encountered. The degree of invasiveness is also an important factor in the nature of the symptoms which may be produced. The location of the ectopic endometrium is the third factor which is responsible for determining the amount of subjective symptoms.

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*Read before the Annual Sessions of Nebraska State Medical Association in Lincoln, May 1-4, 1950.

The characteristic symptoms of endometriosis are pelvic pain, abnormal bleeding, palpable tumor, dysmenorrhea, dyspareunia, and sterility. A great variation exists in the relationship between these signs and symptoms. Extensive endometriosis may be entirely asymptomatic.

ADENOMYOSIS

The majority of investigators believe that adenomyosis results from the down-growth of the normally located endometrium into the uterine wall. Varying degrees of invasion of the myometrium are encountered and in occasional instances penetration of the serous surface of the uterus may occur producing external endometriosis. Other etiological factors cannot be entirely ignored and include the possibility of edometrium developing in situ from embryonic rests, and the transfer of fragments of living endometrium by lymphatic or vascular channels.

The patient with internal edometriosis is usually over the age of 35. The most frequent symptom is abnormal bleeding which may be hyper-menorrhea or may include irregular episodes of bleeding suggesting the commonly encountered functional bleeding of this age period. Pain, cramping in character, is frequently associated. The uterus is often slightly enlarged, somewhat nodular in consistency, and frequently contains small leiomyofibromata in which endometrial islands may be found. Such patients, may be treated as functional bleeders after careful examination, diagnostic dilation and curettage and vaginal smears have ruled out the presence of corpus carcinoma. When such an approach to treatment is unsuccesful, hysterectomy with preservation of the ovaries is usually indicated and although the preoperative diagnosis may be suspected it is seldom confirmed until gross inspection of the incised uterus and microscopic examination are performed.

EXTERNAL ENDOMETRIOSIS

The etiology of external endometriosis differs from that of the internal variety except for the occasional case where invasion of the endometrium extends completely through the uterine wall to its serous surface producing a combination of internal and external endometriosis. One of two theories is usually supported to explain the occurrence of pelvic endometriosis. These include the theory of retrograde menstruation with implantation upon the peritoneal surfaces as suggested by Sampson. This theory is supported by many observations including the occurrence of endometriosis in the laparotomy scar following such procedures as cesarean section where endometrium might be implanted into the abdominal wall. Also the occurrence of endometriosis on the vaginal face of the cervix, in the vagina and about the vulva which might represent implantation of endometrium at the time of menstruation, presupposes the ability of menstruating endometrium to produce implants. The presence of cervical strictures and of retro-displacement of the uterus are looked upon as predisposing factors in the occurrance of retrograde menstruation. Neither of these are constant findings in patients with pelvic endometriosis. One objection to the implantation theory has very recently been eliminated by the demonstration by TeLinde that, in the monkey, the production of endometriosis can be accomplished by diverting menstrual blood into the peritoneal cavity. This demonstrates that there are viable fragments of endometrium in the slough which occurs at the time of normal menstruation. The second theory suggested by Robert Meyer supports the idea that external endometriosis develops in situ from undifferentiated serosal cells having a toto-potentially that responds to some unknown stimulus. Meigs believes that a prolonged period of voluntary infertility accounts for a greater frequency of ednometriosis in patients seen in private practice in comparison with those seen in gynecologic clinics.

The diagnosis of external endometriosis is usually easy. The characteristic symptom is pain associated with the menstrual periods. It is typically progressive in severity and gradually antedates the period by a longer interval until the patient complains of pain during the second half of the cycle and throughout menstruation. In advanced cases some pain may be present all of the time, but is exaggerated as the menstrual period approaches. Many patients with endometriosis show a disturbance of the menstrual cycle with profuse and prolonged periods or occasionally with episodes of irregular bleeding.

The physical findings are also readily recognized and include the demonstration on pelvic examination of fixed, often cystic, adnexal masses associated particularly with nodulation in the posterior cul-de-sac, sacro-uterine ligaments and on the posterior surface of the uterus. Gross inspection within the pelvis of a patient who has endometriosis reveals the characteristic scarred, blood filled, discolored island of enometriosis which are considered diagnostic.

The following case report is typical:

R. W. A 38-year-old woman was admitted to the hospital on March 8, 1949, and discharged on March 19, 1949.

Chief complaint: Lower abdominal discomfort.

Present illness: She had had pelvic pain during the past year. Dysmenorrhea had always been present, but had increased in severity in the past few years. Menstrual periods had been regular at 30-day intervals lasting three days. She had had an acute attack of severe abdominal pain and distention a year previously, at which time she had been hospitalized and a left adnexal mass had been described. She had been married eight years and had never been pregnant.

Physical examination: The patient was obese. Perineum intact. Cervix posterior. The body of the uterus forward, normal in size and limited in mobility. A fixed, cystic mass approximately 8 cm. in diameter was palpable in the region of the left ovary.

Laboratory: The urine was normal; hemoglobin was 13 grams; white blood count 8,500 with a normal differential.

Operation: A left salpingo-oophorectomy was done. The tube and ovary formed a mass adherent to the posterior surface of the broad ligament extending from the lateral pelvic wall to the uterine horn. Upon the surface of the mass there were a number of hemorrhagic areas and during the dissection small blood filled locules were opened. Inspection deep in the cul-de-sac revealed some old blood with surrounding scar tissue producing fixation to the rectum and the posterior surface of the uterus.

Pathology report: Cystic ovary with tubo-ovarian adhesions. The blood filled spaces as well as the tissue removed from the posterior cul-de-sac contained degenerated chorionic villi.

Final diagnosis: Ectopic pregnancy, old. Residual inflammatory disease. Cystic ovary. No evidence of endometriosis.

This patient exhibited all of the characteristic symptoms and physical findings of endometriosis. At laparotomy the gross appearance of the tissue confirmed that diagnosis. Actually then, the diagnosis of endometriosis is often a difficult one to make. In many instances, the history is suggestive, but characteristic physical findings are absent. In other instances, the patient may give no history of pain and still have a well-developed endometriosis. The possibility of endometriosis should be considered whenever either the history or physical findings suggest its presence. The frequency with which the diagnosis is correctly made will depend upon the routine consideration of this possibility and careful investigation of all patients with obscure pelvic complaints.

The most characteristic physical findings are the presence of fixed modules upon the posterior surface of the uterus, in the cul-de-sac and involving the sacro-uterine ligaments. These are characteristically tender. The tenderness increases as the menstrual period approaches. There is usually some limitation of mobility of the uterus and tenderness upon manipulation. The presence of adnexal cystic masses are a frequent but inconstant finding. Hemorrhage into endometrial islands in the ovaries produces the characteristic chocolate cysts. It must be remembered that bleeding into any ovarian cyst will produce the same gross appearance. It is also true that hemorrhage under tension in a cyst may destroy the characteristic endometrial lining and make accurate diagnosis impossible without the presence of additional endometrial implants. The gross appearance of an endometrial implant is characteristic and produces an area of bluish discoloration surrounded by some scarring and puckering. This is diagnostic in the majority of instances.

Invasive lesions may involve the sigmoid colon and produce a stricture with surrounding scar tissue and rectal bleeding simulating carcinoma. The differential diagnosis can usually be made by the cyclic character of the symptoms, evidence of endometriosis elsewhere and the confirmation of its character by microscopic examination and biopsy. The bladder wall may be involved with a resultant lesions in the bladder sugesting carcinoma and producing hematuria.

Decision concerning the treatment of endometriosis is dependent upon the careful evaluation of a number of factors. These are listed by Brewer as follows:

1. Severity of the symptoms (Pain, bleeding or both).
2. Age.
3. Extent of the lesion.
4. Type of lesion
   a. Superficial
   b. Ovarian
   c. Penetrating
5. Previous operation for endometriosis.
6. Parity.
7. Desire for pregnancy.
8. Anticipated reaction of the patient to castration.
9. Presence of pregnancy.
10. Coexisting pelvic pathologic lesions.

The following possibilities in the management of patients with endometriosis should be considered:

1. No treatment.
2. Non-Surgical Management
   - a. Symptomatic
   - b. Hormonal
3. Conservative Surgery
   - a. Retaining childbearing function
   - b. Retaining some ovarian function
4. Radical Surgery.
5. Irradiation
   - a. Temporary castration
   - b. Permanent castration

In young women with minimal lesions, no active treatment may be necessary. Observation concerning the progression of the endometriosis is indicated and pregnancy should be encouraged promptly if planned for any time in the future. Where more extensive endometriosis is present, the possibility of non-surgical management particularly in the younger age group is worthy of consideration. Symptomatic therapy for relief of pain may be all that is required. Successful results with the administration of the male sex hormone has been reported and may merit trial. The effectiveness of the male sex hormone is dependent uopn its ability to produce atrophy of the endometrium and cesation of function regardless of whether it is normally or ectopically located. Consequently a decrease of symptoms is to be expected and frequently a decrease in the size of the palpable masses occurs. Caution concerning the possibility of masculinization is essential and the dose used should never be more than 150 mgm. in a given ovarian cycle. Dosages smaller than this have produced masculinization. Such treatment is only temporary and recurrence of growth and redevelopment of symptoms takes place when therapy is stopped.

Administration of estrogenic hormone and more particularly stilbestrol has been suggested. It would seem to be less physiologic but the ability to control abnormal bleeding by such therapy must be recognized and there is no evidence that it is harmful. The improvement of some patients with endometriosis who become pregnant is supportive evidence for the administration of estrogenic hormone.

The majority of patient's with symptomatic endometriosis who are not near the menapause are best treated by conservative surgery. Even extensive endometriosis may be so treated that some ovarian function is preserved and in many instances the child bearing capacity of the individual can be preserved. In 138 cases of pelvic endometriosis Bacon reports that 49% were completely relieved of symptoms following surgery in which the child bearing ability was preserved. Only 29% of these patients required subsequent surgery. Of the 112 patients in the series who were married and under 40 years of age, 28.8% delivered subsequent to the operation. The average interval between operation and delivery was 2.7 years. He states that the prognosis for symptomatic relief and future pregnancy does not seem to be affected by age, symptomatology, the location or extent of the disease in this group of patients where conservative surgery was performed.

Radical surgery is indicated in patients with extensive endometriosis over the age of 40 and in younger patients who do not desire children. Castration is the procedure of choice in patients with penetrating lesions of the bowel or bladder. In the majority of such instances no surgical approach to the involved bowel or bladder is indicated as atrophy takes place subsequent to castration with resultant relief of symptoms.

X-ray therapy may be considered in patients who are poor operative risks or in whom complete removal of the ovaries has not been performed at previous operative procedures and where recurrence of symptoms has taken place. Schmitz and Towne report that in selected patients temporary castration has been associated with relief of symptoms and the subsequent occurrence of normal pregnancy. In the majority of patients, who require treatment, a surgical aproach proves more satisfactory than does irradiation.

The occurrence of pregnancy in a patient with endometriosis may result in relief of symptoms even where endometriosis is extensive. Pregnancy usually progresses normally and vaginal delivery is to be anticipated. Operation during the course of pregnancy is seldom necessary.

The proper management of endometriosis remains a difficult problem just as does its initial diagnosis. The physician who looks for it, who considers it as a possibility in every gynecologic examination and who treats it conservatively, once the diagnosis has been made, is to be commended.

The Goiter Problem Today

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The goiter problem today, owing to the fairly recent introduction of antithyroid drugs and irradiated iodine, is not a settled one. Extensive research is being done, and the physiology is very much better understood. New methods of diagnosis have been developed. What is the best treatment? The use of iodine, x-ray therapy, surgery, antithyroid drugs, radio-active iodine, or combinations of these must be considered. It is too early to predict with certainty the end results or possible late dangers of the antithyroid drugs and radio-active iodine. Many cures have been obtained with surgery, with antithyroid drugs, the most popular of which is propylthiouracil, and with radioactive iodine. Which is the best, or does each have its specific indications? In this paper an attempt will be made to give an unbiased discussion of the present methods of diagnosis and treatment of goiter. Owing to lack of time, hypothyrodism, thyroiditis, and malignant tumors will not be discussed.

The thyroid gland is stimulated by the thyrotropic hormone of the pituitary. This stimulation causes marked hyperplasia of the epithelium of the thyroid which becomes columnar in type with papillary infoldings to increase the amount of secreting epithelium. There is decreased colloid in the follicles and marked excess liberation of thyroid hormone into the blood stream. This causes the typical symptoms of thyrotoxicosis. The thyroid hormone, thyroxine, is 65% iodine by weight. Therefore, iodine metabolism is a very important factor in thyroid physiology.

Normally the iodine content of the entire body is only 50 milligrams. The selective absorption of iodine by the thyroid was demonstrated by Marine. This small gland contains normally about one-fifth of the total iodine of the body. Iodine is ingested in small amounts in food, water, or as a drug. The daily requirements of iodine are only 200 micrograms. Absorption from the intestine very rapidly occurs as iodides, much of which are transported by the blood to the thyroid gland. There the iodide is oxidized to iodine, then 2 atoms of iodine are linked to each molecule of tyrosine to form diiodotyrosine. Two diiodotyrosine molecules join through an ether bond to form the hormone thyroxine, which is stored in the colloid as thyroglobulin.

The synthesis and the delivery of the thyroid hormone from the thyroid to the blood are under control of the thyrotropic hormone of the anterior pituitary. Normally this is well regulated as it is inhibited by thyroid hormone or by iodine. It may be stimulated by lack of these or by the brain, as by emotional upsets. This latter mechanism may be the etiology of Graves' disease.

The widespread use of iodine in the preoperative preparation in patients with toxic goiter was begun by Plummer in 1923. Within a period of one to two weeks' treatment, there is usually marked amelioration of the thyrotoxicosis. Its exact manner of action is still not well understood. However, usually it does not give lasting benefit. In fact, commonly after it has been used several months it looses its effect and the patients become worse in spite of it. These iodine-fast patients are usually the worst operative risks. Iodine is of great benefit in the preoperative treatment of the moderately severe and mild cases of thyrotoxicosis. Occasionally it gives very dramatic results in the severe thyrotoxicosis but often will not reduce the basal metabolic rate to normal. Rather than to continue to rely on iodine in this case, it is advisable to supplement it with some other form of treatment.

Thiouracil was first used clinically by Astwood in 1943. It acts by blocking the iodinization of the thyroid hormone. As the hormone in the thyroid gland is used up, the thyrotoxic symptoms subside and the basal metabolic rate returns to normal. It is much slower acting than iodine but more effective in relieving the thyrotoxicosis. As the hormone in the thyroid gland is used up the danger of a thyroid crisis following thyroidectomy is practically nil. This makes the operative mortality very low. It is the best form of preoperative treatment in the iodine resistant goiter. Propylthiouracil is the form now most commonly used. It is usually started in doses of 200 to 300 mg. given as tablets by mouth daily. Iodine is given with it or at least the last two to three weeks before operation to produce involution of the gland and so make the operation easier.

Many have advised propythiouracil as the sole treatment in thyrotoxicosis. If used this way, when the basal metabolic rate becomes normal, the dose should be reduced to the amount required to hold it at this level. To be effective it must be used for at least six months to a year. The patient needs frequent examinations for evidences of toxicity and to check the symptoms and basal metabolic rate. Besides these handicaps, the results have been disappointing as the toxic symptoms recur in about half of the patients.

REMISSIONS AFTER WITHDRAWAL OF THIOURACIL

Author	No. of Cases	Remission No.	Remission %
Astwood	18	9	50
Rose & McConnell	21	8	38
Barr & Shorr	47	36	77
Fishberg & Vorzimer	41	16	39
Williams	100	49	49
Bartels	21	8	38
Aranow, et al	33	12	36
Fowler & Cole	19	9	47
Bierwaltes & Sturgis	13	8	62
Total	313	155	49

Radioactive iodine is a great boon to the study of iodine metabolism, of thyroid physiology, and of the diagnosis and treatment of hyperthyroidism, and of carcinoma of the thyroid. In 1936 Dr. Karl T. Compton of Massachusetts Institute of Technology used it in the treatment of hyperplastic thyroid in animals. Hertz in 1941 was the first to treat human hyperthyroidism by radioactive iodine.

Very small amounts of radioactive iodine, usually about 100 millicuries of I^{131} may be given by mouth as a tracer dose. It may be given in some iodide as carrier or alone in water or physiological saline. It is absorbed not unlike any other iodide and similarly distributed in the body and excreted. By counting its uptake in the thyroid gland, using a Geiger-Muller counter, and by measuring its excretion in the urine, a fairly accurate estimate of thyroid activity is obtained. Roughly, it is considered that the iodine which is not taken up by the thyroid is excreted in the urine. Therefore obtaining both determinations gives a double check. Actually these do not add up to 100 per cent as there is some iodine in the blood, muscles, and other tissues. Thyroid uptake plus urinary excretion usually amounts to 70 to 85 per cent of the amount ingested.

Normally, when I^{131} is given, it will begin to collect in the thyroid in two to three minutes. During the first three hours its uptake is about 6 per cent an hour or less. The count at 24 hours is 15 to 35 per cent of the ingested dose. In hyperthyroidism the uptake in the gland is rapid and excessive, in fact most of it may appear in the gland in one or two hours. At 24 hours, the uptake is usually 40 per cent or over. In hypothyroidism at 24 hours it is usually under 10 per cent. The thyroid shows an increased avidity for iodine in hyperplastic glands with excess of thyrotrophic hormone, with glands during or immediately after treatment with the thiouracil group of drugs, or when there has been iodine lack. To determine iodine uptake, one must be sure the patient has not been taking iodine recently.

Urinary excretion of radio-iodine in 24 hours in normal people and those with hypothyroidism is 40 to 70 per cent of the ingested dose. In hyperthyroidism it is usually 10 to 30 per cent. After the first day the excretion continues at a significant rate only in hypothyroidism. In hyperthyroidism more is excreted in the first six hours than in the following eighteen hours, probably due to increased renal clearance. This is reversed in normal people.

The value of determining the urinary excretion as well as the thyroid uptake is illustrated by the following case report, coming from Massachusetts General Hospital in Boston.

Thyroidectomy for Graves' disease was performed upon a woman ten years ago. Subsequently two fruitless explorations of the neck had been done elsewhere for suspected recurrent thyrotoxicosis. At entrance to Massachusetts General Hospital she had the classical appearance of Graves' disease, except there was no goiter. The basal metabolic rate was plus 52 per cent. Struma ovarii was suspected because of slight enlargement of the right ovary. Search with a Geiger counter showed no radio-iodine concentrating tissue anywhere in the body, and virtually the entire tracer dose of iodine was excreted within twenty-four hours. The diagnosis of thyrotoxicosis factitia was then made. It was confirmed by finding dessicated thyroid tablets in the patient's possession and by the rapid clinical improvement, fall of B.M.R. and of serum protein bound iodine after withdrawal of the dessicated thyroid.

Means reported a woman with persistently elevated basal metabolism and some symptoms suggestive of thyrotoxicosis. However her radio-iodine collection and protein bound iodine of the blood were normal. At autopsy it was shown that she had a pheochromocytoma, a hyperfunctioning tumor of the adrenal medulla. The excess of calorigenic hormone which raised her basal metabolic rate was not thyroxine but was adrenalin, so iodine collection and hormone iodine in the blood were not elevated.

Treatment of hyperthyroidism by the use of radio-active iodine has been extensively used in the last few years. It acts by the destruction of the epithelial cells of the thyroid mainly by the beta rays. The I^{131} collects rapidly in the lumen of the follicle. The beta rays are very active for a distance of 1 to 2 millimeters so the dose is concentrated just where it is most needed. The end result is considerable fibrosis of the gland. The best results are obtained in toxic diffuse goiter of small size. It is better to start with an inadequate dose than with too large an amount. In the former instance more may be given. One to five doses may be needed. With too large a single dose a permanent hypothyroidism or myxedema may be produced. Response may be obtained in nearly every patient who survives long enough. Occasionally about one week after giving it, the thyrotoxicosis may be worse temporarily, and there may be some enlargement and tenderness of the thyroid. Therefore, it may be unwise to use this in severe thyroid crisis. The sensitivity of I^{131} varies considerably. The dose varies with the severity of thyrotoxicosis, the size of the thyroid, and the type of goiter. The total dose usually varies from 3 to 20 millicuries.

RADIO-ACTIVE IODINE THERAPY OF GRAVES' DISEASE

Author	Year	No. of Patients	Cure	
			No.	%
Hamilton & Lawrence	1942	3	2	67
Hertz & Roberts M.G.H.	1946	23	20	86
Chapman & Evans M.G.H.	1946	22	20	91
Chapman M.G.H.	1948	65	57	87
Clark, Moe, Rule, Adams and Tripple Uni. of Chicago	1950	100	100	100
Gordon Uni. of Wisconsin	1950	135	135	100

Toxic nodular goiter responds less satisfactorily. The improvement is less sure, requires two to three times the dosage, and is slower than in the diffuse type.

For the last two years Richards at Cleveland Clinic reports the use of radio-iodine in toxic nodular goiter. It is indicated in the bad risk patient and after failure of thiouracil or surgery. He gives twice as large an initial dose as in diffuse goiter. Of 33 patients so treated, at two months 28 were in remission. The dose was 23 to 66 millicuries. The initial dose now used in toxic nodular goiter in the clinic is 17 to 21 millicuries. Nine of the patients had suricular fibrillation and only one of these was relieved of this disturbance by the treatment.

Treatment by radio-iodine should not be used during pregnancy, in large goiters, or when there is suspicion of carcinoma.

Graves' disease usually responds to radioactive iodine therapy. This is simple, the patient merely drinking some water containing it. No hospital time and expense are necessary, the patient does not have to go through the fear and distress of a surgical operation, and no frequent evaluations of possible toxic side effects are necessary as in the case of antithyroid drugs. But there is disagreement as to the likelihood of late carcinogenesis. It will be ten to twenty years before this hazard may be evaluated. Because of this possibility, many authorities do not advise its use in people under thirty-five to fifty years of age. Theoretically, the risk is probably not great.

Thyroidectomy is a well tried and satisfactory form of therapy. Good results are obtained in 90 to 95 per cent of the patients. The mortality at the present time, under a capable surgeon, is extremely low (0.1-0.5 per cent). Mild and moderate thyrotoxicosis can be rapidly prepared for thyroidectomy by iodine. In the severe cases or those who are resistent to iodine, propylthiouracil may be used in preparation. Iodine may be given with it or at least during the two or three weeks preceding surgery. In the properly prepared patient, postoperative thyroid crisis will not occur. Thyroidectomy is applicable to toxic diffuse goiter, to nodular goiter, either non-toxic or toxic and to carcinoma of the thyroid. In pregnancy it is the only form of treatment which will not injure the fetus. No other treatment so helps large goiters with pressure symptoms. In suspected carcinoma of the thyroid, surgery should be used without delay.

TESTS IN DIAGNOSIS

Several tests aid clinical judgment in evaluating thyroid activity. None is absolutely accurate. Doing several of them gives greater certainty to diagnosis. The old standby is basal metabolic rate, which indicates the activity of the hormone delivered by the thyroid on the cells of the body. It is elevated in hyperthyroidism and decreased in hypothyroidism. Blood cholesterol is decreased in hyperthyroidism and increased in hypothyroidism. Normal is 180 plus-minus 30 mg. per 100 cubic centimeters of blood. In myxedema it is usually over 300 mg. per cent. It aids more in hypothyroidism than in thyrotoxicosis.

Protein-bound iodine of the blood indicates the amount of thyroid hormone. Normal is 3.5 to 8 micrograms per cent. It is increased in hyperthyroidism. It is a very difficult test and few laboratories are equipped to do it. Using radio-iodine in tracer doses, additional evidence is given by determining the thyroid uptake and also by the urinary excretion studies.

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TESTS OF THYROID FUNCTION

Test	Normal	Hyper	Hypo
B M R	—10 - +10%	Over +10%	Under —10%
Blood cholesterol	180 +/—30 mg.%	Under 150 mg.%	Over 210 mg. %
Protein bound iodine of blood	3.5 - 8.0 micrograms%	Over 8.0 micrograms %	Under 3.5 micrograms %
I^{131} uptake in thyroid	6% an hour first few hrs. 15 - 35% in 24 hrs.	Over 6% an hr. Over 40% in 24 hrs.	Under 6% an hr. Under 10% in 24 hrs.
Urinary excretion of I^{131} in 24 hours	40 - 70%	10 - 30%	60 - 90%

The treatment of non-toxic goiter if large, and causing pressure symptoms, is thyroidectomy. What should be done in case of a small symptomless nodular goiter? Many of them will become toxic after many years. Others when first seen may be or may become malignant. The danger is real, especially in the thyroid with a single non-toxic nodule. Many reliable statistics show carcinoma to eventually occur in 16 to 24 per cent. It is true that statistics are from hospitals and in general practice the number probably is somewhat less. However, many of the leading authorities on goiter advise surgical excision of the nodule to avoid this risk.

SUMMARY

Iodine usually produces a temporary partial or complete remission of thyrotoxicosis. Its chief uses are in prophylaxis of goiter and preoperative treatment. It is not good definitive treatment as resistance often develops.

Roentgen therapy is seldom used except for carcinoma.

Thiouracil may be a fine aid in preoperative treatment of the toxic patient. It nearly always gives complete remission but recurrences appear in about half of the cases after it is discontinued.

Radio-iodine nearly always gives remission in toxic diffuse goiter. It is fairly effective in the small toxic nodular goiter but a larger dose is usually needed. Its chief objection is the theoretic danger of carcinoma which may develop many years after treatment.

Thyroidectomy will cure 95 per cent of toxic goiter. The mortality is now extremely low.

Non-toxic, diffuse goiter is often cured by the use of iodine.

Graves' disease may be cured in nearly all cases by radio-active iodine or by thyroidectomy. Opinion is divided as to which is preferable.

Non-toxic nodular goiter should be let alone except for use of iodized salt, or treated by surgery. There is a definite risk of carcinoma.

Toxic nodular goiter is considered by most to be a surgical condition but a few use radio-iodine.

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Proctoscopy for the Physician*

J. B. CHRISTENSEN, M.D.
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The purpose of this presentation is to encourage a broader use of the proctoscope in the diagnosis and treatment of diseases of the rectum and colon. A proctoscopic examination should become a part of every complete physical examination. We must use this diagnostic procedure, if we are to prevent and detect cancer of the colon.

In recent years there has been an increasing interest in the use of the proctoscope by the medical students and the practicing physicians. It is gratifying to find that many internists and others are now including a proctoscopic examination as a part of the complete physical examinations.

At present only an occasional candidate for life insurance is examined so thoroughly, but in time I am sure that, as the physicians become more competent to do this simple examination, it will become more routine.

The detection of the cases of ulcerative colitis and familial polyposis alone make this examination advisable.

The average patient is rapidly losing hesitancy to have the anus and the colon examined. There is less false modesty and greater desire to cooperate with the physician. The physicians and patients together have in recent years made great strides in the education of the public to the detection of cancer. I fear the patients may be ahead of us. They have been told and read that bleeding from the bowel should be investigated, but I don't believe that enough of us are ready and able to provide that careful examination, that they think they are going to get.

If we are going to prevent cancer, we must search for and recognize the benign precancerous polypi in the colon. These are too small to cause symptoms other than occasional bleeding and cannot as a rule be demonstrated on radiographic studies.

THE TABLE

No special table is needed. A good proctoscopic table is helpful and saves time when many patients are seen, but for the occasional examination the patient can be examined on a table of any sort in a knee-chest position. Have him get first on the hands and knees, and then cross the left arm beneath the chest and instruct him to put the left ear on the table. This maneuver will help to lower the back and place the patient in the best possible position. If necessary, the examination can be done in the patient's bed by crossing it diagonally. A weak or ill patient should be supported by an attendant. A slightly darkened room is helpful in examining the bowel.

THE INSTRUMENT NEEDED

If you are to have but one proctoscope, I would say it should be the 5/8-inch diameter in the 10-inch length. Smaller scopes may be introduced a little higher in some instances, but it is more difficult to orient yourself because the area visualized at any one time is too small. Larger diameter scopes will show more of the mucosa and this is to be desired, except that the larger scope will cause more discomfort, and in the case of an anal lesion, may make it too painful to examine the patient. Scopes longer than 10 inches are an additional handicap—usually the 10-inch scope is adequate.

The lights used on the distal end of a proctoscope are delicate and often break or become covered over during the examination. In my opinion a light attached at the outer end is more desirable.

A 1.5 to 2.5 power lens over the scope serves two purposes. It magnifies the field just a little and makes the scope air tight. A bulb and connection for inflation of the colon is helpful.

There are no cases reported of accident or injury to a patient inflated in this manner. The patient may complain of fullness or cramping at first, and if this is not heeded, he may pass the air around the scope.

A source of electric power may be either dry cells or a small transformer. Long cotton swabs and a suction tip will complete the diagnostic set. The cost of this basic set is about thirty dollars.

PREPARATION OF THE BOWEL FOR PROCTOSCOPIC EXAMINATION

Generally, I would rather have the patient come to the office without special preparation of the bowel for examination. Too often he will either have used soap solutions as enemas, resulting in colonic hyperemia and spasm, or the bowel still filled with water from too late an enema. If I can see the patient as he is every day, I can better evaluate the amount and type of stool and the condition of the mucosa.

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*Read before the Nebraska State Medical Association, 1950 Annual Session, May 4, 1950, Lincoln, Nebraska.

Many patients can be examined without special preparation. If a cleaning out is necessary, it can be done by using warm saline solution. This may be used repeatedly without causing hyperemia or excess of mucous secretion.

Castor oil, ounces 1½, or saline purgatives are satisfactory. If suction is available, a little water in the bowel will not prevent you from completing the examination.

PROCEDURE

A proctoscope can be more easily introduced by using vaseline than a water soluble jelly. The latter is more easily washed off the instrument, but does not stay with the surface of the scope well enough to properly lubricate it. A digital examination should precede the instrument as part of a complete anal examination, and, also, to determine the tenderness and size of the anus.

With the obturator held in place the scope is then introduced, pointing it toward the umbilicus, using steady but gentle pressure until the sphincter muscle is passed. Then remove the obturator and attach the light, lens, and air inflator. From this point on the scope is passed only under direct vision. Serious injury or perforation will not occur, if the end of the scope is continuously observed.

We must remember that the bowel is quite insensitive to ordinary injury and can be cut or cauterized without pain. Stretching and pull on the mesentery will cause cramping and distress. Pressure on pelvic organs and perineal structures can likewise cause discomfort.

The direction of the scope now changes to point at or posterior to the promontory of the sacrum. Inflation of the bowel should be started. Introduce just enough air to keep the bowel open in front of the scope. If an excess is introduced, it will pass on up in the colon and cause distress, or be passed along side of the scope. The proper amount of air is helpful, because it makes more of the lumen visible at one time, and in this way aids in orienting the operator.

If it appears that a blind end is encountered, the scope has passed in back of the valve, or fold of mucosa, and should be slowly withdrawn until the free side of the fold is found. Now introduce the scope in this direction, crowding the fold aside. The direction of the scope will gradually change to a point anterior to the promontory of the sacrum to make it possible to pass into the sigmoid loop. At the rectosigmoid junction, the bowel will have a different appearance. Instead of the smooth folds of mucosa you will see concentric rings of mucosal folds blending into one another. Here the lumen is smaller and will not as readily inflate. The sigmoid may often appear to contract to prevent the passage of the scope. When air is introduced, and no attempt is made to force the scope into the bowel, it will often relax. After an interval a little more inflation may dilate the sigmoid for a distance of 5 to 10 cm. beyond the end of the scope. A polyp in this area could at this time be easily recognized. We must keep in mind that above the rectosigmoid junction the bowel is within the peritoneal cavity. The scope may now be gently introduced at least partly into this bowel.

A word of encouragement to the patient and having him exhale, followed by regular breathing, may help to bring the bowel in line with the scope.

By reflex action the bowel will often again contract as the scope enters it and delay again the introduction of the scope to a higher level. We cannot go above a definite stricture, around a corner, or examine a very painful lesion. A proctoscopic examination can be done under anesthesia, using or improvising a proctoscopic table, but you must be more gentle, not less!

When you have gone as high as is possible, begin to withdraw the scope in a spiraling manner, carefully watching through the scope at all times. A polyp may lie on the upper side of a mucosal fold or valve.

WHAT CAN WE SEE?

It is not the object of this paper to go into great detail. I will, therefore, only mention the more important and common lesions that may be encountered. The detection of cancer and the precancerous polyp will head the list for they are of vital concern to the patient. We may also find endomentrosis or non malignant tumors. Strictures of the rectum and colon may be studied. Treatment and progress of these diseases may be intelligently done through a proctoscopic examination. Radiologic studies come second to actual visualization of the diseased tissue. Acute and chronic colitis can be diagnosed and the response to treatment noted. Foreign bodies may be found and removed by the aid of a proctoscope.

The question of rectal bleeding may be more definitely answered by using a proctoscope. It is true that the source may not be seen, but since all anal lesions and about 80 per cent of all cancer and precancerous lesions of the colon can be seen, less than 20 per cent remain above the level of the scope. In this group the scope may give definite clues of the nature of the lesion. For example persistent strings of mucus streaked with bright flecks of blood coming down from above the area proctoscoped would indicate a polyp just around the corner in the upper sigmoid or descending colon. If this patient was otherwise well and the mucosa appeared normal, a surgeon would be justified in exploring the abdomen searching for a polyp in that segment of the bowel and removing it by colostomy. This is the type of diagnostic work that will prevent cancer. It is worth more to the patient than the most heroic radical removal of organs in the advanced stages of the disease.

It will not be possible to pass the scope all the way on a considerable number of patients, because of such conditions as malformations, pelvic inflammation or tumors, previous surgery of the pelvic organs, and many others, but even a limited examination may be of great value.

SUMMARY

A plea is made for the more general use of the proctoscope as a diagnostic instrument. A brief discussion of the value and limitations of the instrument is presented.

* * *

Management of a Blood Bank*

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The blood bank at the Veterans Administration Hospital in Lincoln, Nebraska, was started on December 1, 1948, and was the first blood bank to be set in operation in this city of 110,000 population. During 1949, 1,806 transfusions (903,000 cc.) were given at this hospital, an average of 150 bottles per month, 35 per week, or 5 per day. The monthly variation during 1949 is shown in Table 1.

TABLE 1
WHOLE BLOOD TRANSFUSIONS AT THE LINCOLN, NEBRASKA VETERANS ADMINISTRATION HOSPITAL DURING 1949

January	159
February	151
March	155
April	118
May	151
June	117
July	152
August	130
September	170
October	68
November	214
December	221
Total	1,806

With the exception of a very occasional gift from the relatives or friends of a grateful patient, blood is obtained here from two sources. Nearly half of the blood used at this hospital is now supplied by the American National Red Cross Regional Blood Center in Omaha, 60 miles away, arriving here by bus, in refrigerated containers. The other source is the civilian population of Lincoln, by means of which it has been possible to obtain a donor list of 2,326 individuals (O 964, A 993, B 253, AB 116). In addition to this, we have an emergency donor list of 83 hospital employees (O 30, A 35, B 12, AB 6). We have at different times paid $25 and $15 for 500 cc. of blood. Most of our professional donors are university students.

A week's supply, or 35 bottles, is kept on hand when the stock is at its maximum, which occurs as often as blood is drawn, or twice a week. After drawing blood, the bank usually contains 17 bottles of type O, 14 bottles of type A, 3 or 4 bottles of type B; no type AB blood is stored under ordinary circumstances. While type AB constitutes a definite percentage of our patients, type AB blood is used irregularly, most commonly for an occasional bleeder, so that the maintaining of an AB bank would not be practical. Our type incidence corresponds fairly closely to values given by various authorities, excepting that type O runs somewhat higher here, while the incidence of type AB here is only a fraction of one per cent. It is the policy at this hospital to avoid the use of universal donors at all times and to employ a rigid "group for group" technique. The incidence of the various types is shown in Table 2.

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*Reviewed in the Veterans Administration and published with the approval of the Chief Medical Director. The statements and conclusions published by the author are the result of his own study and do not necessarily reflect the opinion or policy of the Veterans Administration.

TABLE 2

PERCENTILE INCIDENCE OF BLOOD GROUPS

	O	A	B	AB
Hepler(1)	42	40	12	6
Strumia and McGraw(2)	46.9	36.6	12.2	4.3
Kilduffe and DeBakey(3)	44	40	10	6
Todd and Sanford(4)	43	40	7	10
Levinson and MacFate(5)	43	40	11	6
Kolmer and Boerner(6)	45	39	12	4
Average of Above Values	44	39	11	6

The figures given in Levinson and MacFate are taken from Smith and Glaister: Recent Advances in Forensic Medicine, Philadelphia, P. Blakiston's Son & Co., 1931. The figures given in Kolmer and Boerner are taken from Wiener, A. S.: Blood Groups and Blood Transfusions, Charles C. Thomas, 1935, p. 158. Obviously, the results of averaging figures obtained from several series of different and unknown sizes can have no exact value, but they do afford a truer approximation than any one set of figures entering into the calculations.

Subatmospheric pressures have not been used in drawing blood, either in the form of the suction bottle or the suction pump. A tourniquet is employed, as I have seen no harm result from its use. Size 15 gauge needles are always used. Blood will not always flow freely through a narrower lumen. These needles have been associated with very little trauma and, after the routine injection of procaine into the skin, with very little pain. Expendable intravenous tubing sets are used both in drawing the blood and in administering it.

It is not uncommon to administer 4 to 6 bottles of blood during an operation. If all of this blood is made to pass through the same filter, it will be found that the second bottle will run more slowly than the first, the third even more slowly, and either the third or fourth will often stop running completely, despite the use of pressure, raising the blood to a greater height, or the use of saline to clear the tubing and needle. The resistance or obstruction is to be found in the filter, which has been designed to take care of the fibrin content of 500 cc. of citrated blood, and is now completely plugged. Blood can be kept running rapidly, as it must be where the blood loss is rapid, by changing filters each time.

Blood is ordered only at the time that it is needed, with two exceptions. These include cases of elective surgery, when blood is ordered on the day preceding the operation, in anticipated amounts, and a second group, consisting of cases of known blood dyscrasias who will require repeated transfusions over a period of several days, and patients with marked and continuous bleeding. An instance of the last group was a case of gastrointestinal hemorrhage in which the patient required, during his first 24 hours of hospitalization, 16,000 cc. (32 bottles) of whole blood and 1750 cc. of blood plasma.

Blood that has been crossmatched and reserved for a patient, but which has not been called for, is automatically returned to the bank's unreserved stock at the end of the day. Except for a very occasional unit sent to the operating room when bleeding, having suddenly become rapid, is as suddenly checked by the surgeon. blood is stored nowhere but in the bank and is not to be returned to the bank once it has been taken out. If too much blood is reserved for patients for possible later use, keeping inventory becomes a hopeless task; too large a stock must be maintained; the blood, when it is finally returned or released, is often old; and the danger of contamination is introduced by the need for opening the bottle for repeated crossmatchings. It is necessary to explain to the hospital staff the hazards of such "reserving," and to make it clear that the policy of holding blood in reserve is a carry-over from a period when there was no bank and such measures were necessary.

Blood that has been taken from the bank and has not been used may have been agitated, warmed, contaminated, or simply left unrefrigerated too long; it is well to discourage returning blood from the start. This will have the added advantage of preventing overordering by the physician who, not being allowed to return blood on one occasion, will seek to avoid such a situation a second time.

Blood is never administered without a negative serological report for syphilis. Donors are rejected for the following reasons:

1. Under 18 years of age, between 18 and 21 without written permission from parent or guardian, or over 55.
2. Systolic arterial blood pressure below 100 or over 200 mm. Hg.; diastolic pressure over 100.
3. Hospitalization during past 6 months.
4. History of syphilis, tuberculosis, malaria, jaundice, allergy, blood dyscrasia, anemia, infectious hepatitis, heart disease, history of having received pooled plasma.

5. Fever (99° F), pulse irregularity, tachycardia (90), bradycardia (60).
6. Eating during the 3 hours preceding drawing of blood.
7. Donating blood during past 3 months.

The size of the bank is determined by several factors. If the bank were originally stocked with only enough blood to last until the next predetermined drawing day, there would be no wastage, but there would be no security for emergencies. The requirements of our busiest month during 1949 were nearly 50% above the average for that year. The amount of blood kept on hand must more than reach until the next drawing, to allow for emergencies and busy periods, but it must not be large enough to result in spoiling.

Managing a blood bank can sometimes appear to require the ability to see into the future. An abdominoperineal resection can require as many as ten units of blood or it may occasionally be done with one. This is more disturbing than it sounds, for all of this blood must be of the same type and must sometimes be RH negative as well. This means that when 2 or 3 bottles have been ordered for the operation, an unforeseen hemorrhage will require considerable scurrying around to get from 3 to 8 additional donors of the same type in a hurry. It means, too, that when 10 have been ordered and only 2 are used, the bank will be flooded with 8 bottles of what may be an infrequently used type. If it has not been an infrequently used type until now, it usually seems to become one at this point, and in 2 or 3 weeks, a large amount of blood may have to be discarded.

Each blood bank, with its problems of maintaining an adequate stock at all times and of avoiding waste, is in reality three or four separate banks which, under a "group for group" regime, can be of no assistance to each other. There is no balancing between a depletion of one type and a stagnation of another.

The amount of blood to be kept in the bank should be greater than the average need per interval between drawings but should not exceed twice the average, since there will be periods of slack as well as heavy demand and, while these cannot be easily anticipated, it is important to avoid having to discard large quantities of over-age blood. The director of the bank, particularly if the hospital be small, must steer a course between the Scylla of the empty bank and the Charybdis of overstocking and waste. A course that will run midway between the dangers of overstocking and understocking is obtained as shown above. In our own case, our average requirements are 35 bottles per week, we draw blood twice a week, and we consider blood to be over-age when it is 2½ weeks old. Our needs are best met by maintaining a supply of 35 bottles, or the requirements of one week or of two drawing periods, in the bank.

Blood is stored here at 5° C for 2½ weeks, after which it is sent to the Red Cross Regional Blood Center for immediate use, which is generally the case, owing to their rapid turnover, or for processing. It is our policy to use as fresh blood as possible in surgery, where the recipient may be unconscious and show little early reaction to incompatible blood. Strumia and McGraw(2) state that it is desirable to store blood for at least 2 weeks, and that storing blood for 2 to 3 weeks is safe for most patients. They add that over-age blood should never be given in elective cases. Kilduffe and DeBakey(3) believe that blood should not be given after 7, or at most 10 days. They add that other workers have set the duration at a few days to as long as 6 weeks. The duration used by the Red Cross is 21 days.

The number of whole blood transfusions given at this hospital in 1947 was 795, a monthly average of 66.25. During 10 nonconsecutive months in 1948, 925 transfusions of whole blood were given, a monthly average of 92.5. In 1949 the monthly average was 150.5. Coincident with the creation of the blood bank, the transfusion service has thus become 50% to 130% busier. The increase in the use of whole blood appears to have begun a month before the bank was inaugurated, but it did not reach the level maintained during 1949; it was not associated with a corresponding increase in the number of operations performed. A comparison of the figures for the years 1947 and 1949 shows an increase of 127% in the number of transfusions of whole blood, while the number of all operative procedures went up only 22%. This suggests that the hospital was becoming "blood conscious" at that time or that having blood readily available resulted in its increased use. Then, too, it is difficult to decide if the change was from a too low level or toward a too high one. I believe the former is certainly the more likely of the two.

There are at the time of this writing more than 1,500 blood banks in the United States(7). Elective and emergency surgery and nonoperative treatment of grave emergencies are greatly facilitated by storing large quantities of anticoagulated blood at low temperatures. Blood has yielded a degree of its strangeness; it is no longer a mysterious substance to be contained only within the living body of a human being. It has become a rather perishable biological commodity, but nevertheless a commodity, to be measured, labeled, stored, and ordered when needed. Its life-saving properties have long been recognized. It has, with the advent of the blood bank, acquired the gift of availability.

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* * *

Infectious Diarrheas

Some Bacteriological and Epidemiological Aspects

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Despite a marked decline in morbidity and mortality from diarrheal diseases during the past half century, the incidence remains relatively high. Severe cases, particularly in young infants, still carry a significant mortality. Because of these facts we feel that a brief summarization of current bacteriological and epidemiological concepts concerning the syndrome "infectious diarrhea" is worth undertaking.

It is our belief that the bacteriologist has much to offer the clinician over and above an etiological classification of infectious diarrheas. More specifically the bacteriological approach offers the following aids:

(a) Render a positive etiological diagnosis of sporadic or epidemic cases of many types of infectious diarrhea by the isolation and identification of pathogenic microorganisms in properly submitted specimens from cases of the disease. The value of a specific and positive diagnosis to therapy is obvious. (b) By the proper use of common bacteriological techniques, to evaluate the actual performance in a nursery, isolation ward, home, office, or even hospital insofar as supposedly sterile techniques are concerned. Indirectly such methods may be used to evaluate the possibilities of an epidemic of infectious diarrhea in a nursery, home, or institution, or in the face of an actual epidemic, such methods may well reveal the sources which allow the spread of the outbreak. (c) Cognizance of sound bacteriological practices in the establishment of routine techniques will prevent many potential outbreaks of epidemic diarrhea by breaking the intestinal-oral or respiratory routes of transmission. (d) Epidemiological survey of sporadic and epidemic cases does much to enlarge our knowledge concerning possible further control of these diseases.

In certain of its aspects our discussion is not an easy one for there is frequently much difference of honest opinion. For instance, what is the specific meaning of the word "diarrhea"? Some make a more or less sharp distinction between "diarrhea" and "dysentery"—calling those states in which the loose stools contain blood and pus, dysenteries; and those which do not, diarrheas. At the autopsy table this distinction may be valid; however, clinically this differentiation seems more or less arbitrary for the severity and duration of symptoms in a particular case or epidemic, and frequently not the specific agent concerned, will determine the degree of inflammation in the mucosa of the intestine. There is evidence that the degree of inflammation in the intestinal mucosa determines whether or not blood and pus will be found in the stool. For our purposes we may consider diarrhea an abnormally frequent discharge of more or less fluid fecal matter from the bowel, frequently accompanied by a change in color and odor of the material, and often associated with the presence of blood, pus, and mucus within the discharges.

After a considerable discussion and review of the recent literature, a modified version of the classification as outlined by Hurtado and Aballi (1947) was accepted even though a few entities seldom seen in this region are included.

CLASSIFICATION OF DIARRHEAL DISEASES

- I. Symptomatic
  - A. Simple Diarrhea
  - B. Enteritis
    - 1. Gastroenteritis
    - 2. Enteritis
    - 3. Enterocolitis
    - 4. Mixed
- II. Etiologic
  - A. Infectious
    - 1. Primary
      - a. Shigellosis
      - b. Salmonellosis
      - c. Amebiasis
      - d. Parasitic diseases
      - e. Tuberculous enteritis
      - f. Cholera
      - g. Other bacterial infections (frequently of doubtful validity) including those due to Proteus sp., Pseudomonas sp., paracolons, streptococci, etc.
      - h. Virus infections including epidemic diarrhea of the newborn and lymphopathia venereum.
      - i. Unknown etiology, probably viral.
    - 2. Secondary
      - a. Parenteral diarrhea
      - b. Severe sepsis
  - B. Non-infectious
    - 1. Irritative (mechanical, chemical, and mixed)
    - 2. Alimentary
      - a. Excesses (quantitative and qualitative)
      - b. Deficiencies, especially vitamin deficiency and protein lack.
      - c. Toxic substances in food including bacterial exotoxins and toxic materials of plant origin.
      - d. Idiosyncrasy (allergy)
    - 3. Functional disturbances of digestive organs
      - a. Primary disturbances of digestive organs
        - (1) Celiac syndrome
        - (2) Achylia gastrica
        - (3) Diseases of accessory organs
          Hepatic cirrhosis
          Pancreatic fibrosis
      - b. Secondary to changes affecting functions
        - (1) Neuroendocrine disorders
        - (2) Disease affecting vitality of body as a whole
        - (3) Psychogenic disorders
    - 4. Organic disease of the gastrointestinal tract
      Tumors, diverticula, regional ileitis, malrotations and other malformations, appendicitis, etc.

The foregoing classification is submitted for possible assistance in differential diagnosis; however, we shall concern ourselves primarily with the infectious diarrheas.

Certain factors concerning etiology and pathogenesis of this syndrome must be briefly mentioned even though the reader is probably completely familiar with their context.

First, the peculiar susceptibility of the infant to diarrhea has not yet been satisfactorily explained. With increasing age this tendency disappears.

Second, infectious diarrhea usually occurs during the summer, in artificially fed infants, and in homes or institutions where standards of cleanliness and hygiene are low. Parenteral infections are commonly associated with attacks of diarrhea in young children.

Third, the increased summer incidence suggests that unrecognized enteric infections may be responsible; however, only a portion of the cases may be so explained on the basis of careful bacteriological examination.

Fourth, it has been widely believed that organisms normally considered to be saphrophytic may when present in sufficient numbers in the intestine of the infant, or even of the adult, be capable of producing diarrhea. To the best of our knowledge Moro (1921) was the first to suggest the possibility that overgrowth of normal intestinal bacteria may play a part in diarrhea. Moro observed that colon bacilli could be isolated from the duodenum in cases of diarrhea, whereas, the duodenum was normally sterile. This observation has now been confirmed and at times colon bacilli have been recovered from the stomach. External heat, fever, and infection are believed to diminish the normally low level of gastric acidity and gastric and duodenal enzymes of the infant to a marked degree. Decreased gastric acidity is believed to be the primary factor which permits these organisms to flourish at higher levels in the alimentary canal than is normal for them.

Fifth, diarrhea in children over two years of age, if not due to enteric infection, is usually the result of dietary indiscretion.

Sixth, except for enteric infections of the so-called dysentery group, there are usually no obvious lesions in the intestines of cases coming to autopsy. There is characteristically only capillary congestion of the vessels of the intestinal mucosa coupled with some increase in mononuclear cells and occasional foci of polymorphonuclear leukocytes. Fatty metamorphosis of the liver and degenerative changes in the other solid viscera are other common findings.

Regardless of the etiology, insofar as symptomatology is concerned, all grades of severity may be encountered, ranging from the very mild to the extremely severe with attendant dehydration and acidosis. The majority of severe acute diarrheas fall into one of two categories, namely, primary enteral infections and so called secondary infectious diarrheas.

In the milder forms there are usually five to twelve stools daily. These discharges are characteristically soft and watery, but do not completely lose their fecal character. The color is frequently altered to a greenish yellow or green due to the presence of increased amounts of biliverdin. The odor is usually foul and undigested fat and much mucus may be present. Such patients may show fever, irritibility, fretfulness, anorexia, vomiting, and colicky abdominal pain. In such mild cases in young infants, the patient may lose weight, remain stationary in weight, or even gain in weight.

In the more severe forms the onset of diarrhea may be explosive or insidious. The body temperature may reach 105° F. or more and be associated with marked prostration, restlessness, or excitability. Vomiting often precedes the onset of diarrhea and may be of varying persistance and seriousness. Vomiting is frequently aggravated by the ingestion of food or water. Neurological signs and symptoms may be severe. Characteristically the stools are frequent, large, and fluid and may be associated with much flatus and colicky pain. The odor is frequently very foul and tenesmus may be marked. Loss of body weight under these conditions may be sudden or if the onset is more gradual, the characteristic syndrome of acidosis and dehydration may appear more gradually.

In general the presence of mucus in the stool signifies irritation of the mucous membrane of the gastrointestinal tract. The addition of pus and blood to the stool usually signifies a more severe inflammatory change; however, as previously noted persistent irritation leads to inflammatory change regardless of the cause. Clinically the presence of severe inflammatory changes, particularly when observed early in the course of a diarrhea, are strongly suggestive of an enteral infection. Similarly abdominal pain and distension are suggestive of enteral infection; however, they are by no means pathognomonic. Toxemias, septicemias, shock-like states, and even purulent meningitis may be seen in association with enteral infections.

Complications of the infectious diarrheas may be serious and dramatic. By far the most frequently encountered complications are those of dehydration and acidosis, which in infants and young children, may run an exceedingly rapid course with fatal termination unless prompt and adequate replacement therapy supervenes. Fortunately modern therapy usually rights the chemical imbalance almost as quickly as it develops. Other metabolic disturbances in the form of hypoglycemia, hypoproteinemia, and vitamin deficiency may appear as complications in the course of diarrhea and must be recognized and treated by the clinician. Visceral complications, including encephalitis, hepatic insufficiency, paralytic ileus, and renal insufficiency, may be occasionally observed; however, as would be expected these are usually complications of severe enteral infections rather than complications of "simple" diarrhea. As an infectious diarrhea profoundly affects the general well being of the patient, infections, such as nasopharyngitis, pyelitis, otitis media, bronchopneumonia, skin infections, or even exacerbation or dissemination of a primary tuberculosis, may occur as complications.

* * *

MEDICAL GROUPS SET UP PLAN TO HANDLE PATIENTS' COMPLAINTS

The American Medical Association announced recently that 34 of its 48 constituent state medical associations and the District of Columbia Medical Society now have committees which will hear complaints from the public.

The purpose of these committees, according to Dr. George F. Lull, Chicago, Secretary and General Manager of the A.M.A., is to "iron out any misunderstandings between the public and the profession." He said that the committees are another expression of the physicians' constant concern for the welfare of their patients.

Under the committee setup, any patient who is dissatisfied with service rendered, who feels he has been overcharged, or who is dissatisfied for any other reason may take his complaint to the medical society. The Committee on Professional Conduct, as these patient-complaint committees are commonly called, will consider his charges, discuss them with the physician concerned, and recommend a solution.

"Experience has shown that most complaints arise out of misunderstandings that are quickly and amicably settled," Dr. Lull said, adding: "In cases involving fees, many difficulties occur solely because the physician and the patient neglect to discuss charges. Patients often don't realize that many tests and treatments are included under the simple heading 'For Professional Services Rendered.' After a committee-arranged conference between doctor and patient, these troubles usually evaporate.

"Even in the cases where a committee finds that the doctor has erred, little difficulty is experienced in settling complaints. Committee after committee has reported to the A.M.A. that they have never had a doctor refuse to accept their recommendations."

If more stringent discipline should be required, however, the medical society has the power to expel the physician involved from membership, or, if charges warrant, can even go so far as to request revocation of his license by the state licensing board.

A majority of the state Committees on Professional Conduct have been established as the direct result of a resolution voted by the A.M.A. House of Delegates last December. This resolution read, in part, "this House of Delegates hereby commends those constituent state associations that have already established committees to hear any complaints of the public and urge that all constituent associations adopt comparable programs."

The following states and the District of Columbia now have special committees set up to hear complaints from the public: Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Illinois, Iowa, Indiana, Kentucky, Maryland, Massachusetts, Michigan, Nebraska, New Hampshire, New Jersey, New Mexico, North Carolina, Ohio, Oklahoma, Rhode Island, Tennessee, Utah, Vermont, Virginia, West Virginia, Wisconsin and Wyoming.

In five states, public grievances are handled by the governing council of the state medical association. These states are Georgia, Kansas, Louisiana, Minnesota and Nevada.

Most of the other state associations are considering the formation of a Professional Conduct committee.

In addition, many county societies have, or are establishing, local committees to hear grievances. The results of a survey of county committees which is now in progress will be announced later.

Tuberculosis Abstracts

The physician may be led to suspect tuberculosis as a diagnosis by either the history or the physical examination of the patient. When this point is reached, the laboratory is prepared to give valuable assistance in helping him to determine a definite diagnosis of tuberculosis.

THE VALUE OF SPECIAL EXAMINATIONS IN THE DIAGNOSIS OF TUBERCULOSIS

Recent advances in the definitive treatment of tuberculosis and other diseases have increased the importance of proving the diagnosis before planning a program of treatment. For this reason, a review of the present status of the various special examinations which help in the diagnosis of tuberculosis with special emphasis on their values and their limitations is timely.

ROENTGENOLOGY IN THE DIAGNOSIS OF TUBERCULOSIS

The two fundamental questions to be considered from a roentgenologic standpoint are — does the roentgenogram show abnormal features? and — does the abnormality represent pathologic changes associated with or caused by a tuberculous infection? The public and the medical profession are well aware of the importance of the so-called mass chest survey. Its value rests on the accuracy of interpretation of the roentgenograms. Whether or not an abnormality represents changes due to a tuberculous infection cannot be unequivocally answered by study of the roentgenogram. The shadows produced by pathologic changes resulting from this infection are often sufficiently characteristic so that a reasonable diagnostic estimate of pulmonary tuberculosis can be made. However, tuberculosis may be simulated roentgenologically by acute and chronic inflammatory processes, neoplastic lesions and other conditions that decrease the radiability of pulmonary tissue.

It is not enough to make a diagnosis of suspected tuberculosis, although this is often a valuable working judgment. An exact etiologic diagnosis must be made, but this is not the responsibility of the roentgenologist. It is enough that the x-ray locates the areas of disease. Among older adults, the possibility that a pulmonary lesion may be malignant suggests that prolonged observation by roentgenologic examination is dangerous. It is impossible to differentiate new primary lesions from those of the reinfection type by roentgenologic examination alone. Not all calcareous deposits in the roentgenograms of the chests of those people who react to tuberculin are due to tuberculosis. Failure to demonstrate the tubercle bacillus in suspected cases does not, however, prove its absence and it is here that serial roentgenologic examinations may be most helpful.

THE TUBERCULIN TEST

The tuberculin test, administered intracutaneously by the method of Mantoux, has been available since 1908 to the medical profession as an aid in the diagnosis of tuberculosis particularly in children and in epidemiologic case-finding. The incidence of positive reactors to the tuberculin test among adults has fallen to a level where the tests assumes considerable diagnostic importance in older indiviuals.

Only two types of tuberculin have had widespread acceptance. Old tuberculin ("OT") is the fluid medium in which tubercle bacilli have been grown. This is sterilized by heat, filtered, and concentrated before dilution to the appropriate dosage. The second preparation, known as "purified protein derivative" or "PPD," is a highly potent purified tuberculoprotein prepared by chemical fractionation from the cultures of tubercle bacilli on nonprotein synthetic culture mediums. Since PPD is more stable and much more potent than old tuberculin, it is probably the tuberculin of choice.

A positive tuberculin reaction indicates that the individual displaying it has, at some time, harbored tubercle bacilli in his body. It does not mean necessarily that active clinical tuberculosis is present or has ever existed. In an adult, a positive reaction may be the residual of a spontaneously healed tuberculosis contracted during youth. The single strength PPD tuberculin test (0.0001 mg. is used at Mayo Clinic for adults) should detect about 95 per cent of the cases with significant tuberculosis.

HISTOPATHOLOGIC EXAMINATION FOR TUBERCULOSIS

The histopathologic examination for tuberculosis is presumptive only, and the diagnosis must be established finally by isolating and identifying the tubercle bacillus. The histopathologic pattern of tuberculosis may be due to any of several other agents and the tissue reaction to the tubercle bacillus may vary so much that histologic examination may not even suggest the presence of the organism. Tissue removed for biopsy should be so selected and handled that satisfactory bacteriologic studies may be made if the condition found is not neoplastic.

BACTERIOLOGIC EXAMINATION FOR TUBERCULOSIS

The bacteriologist employs three procedures which may aid in the diagnosis of tuberculosis: (1) the smear stained for acid-fast bacilli, (2) culture, and (3) guinea pig inoculation. They are only aids; the clinician makes the diagnosis. It is presumed, however, that a positive result obtained on guinea pig inoculation for tuberculosis constitutes indirectly a diagnosis for the patient.

The finding of acid-fast bacilli in a smear is only suggestive of the diagnosis of tuberculosis. Similarly, a smear that does not show acid-fast bacilli is of little value in ruling out this disease. The cultural technic for isolating and identifying acid-fast bacilli is a satisfactory screening procedure when performed by highly skilled workers. All newly isolated strains of acid-fast bacilli should be tested for virulence in animals. The inoculation of guinea pigs is the most satisfactory single procedure for detecting tuberculosis in the variety of specimens submitted to the diagnostic laboratory.

(Continued on p. xxviii)

The Nebraska State Medical Journal

Sharp Building, Lincoln, Nebraska
Federal Securities Building, Lincoln, Nebraska

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Subscription $2.50 Per Year. Single Copies 35c Each

The Publication Board does not assume responsibility for opinions expressed in original articles published in this Journal.

Manuscripts should be typewritten, double-spaced, and the original, not the carbon, submitted.

Reprints should be ordered from the printer, The Huse Publishing Co., Norfolk, Nebraska.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

Vol. 36 March No. 3

THE A.M.A. TWELVE POINT PROGRAM

1. Creation of a Federal Department of Health of Cabinet status with a Secretary who is a Doctor of Medicine.
2. Promotion of medical research through a National Science Foundation with grants to private institutions which have facilities and personnel sufficient to carry on qualified research.
3. Further development and wider coverage by voluntary hospital and medical care plans to meet the costs of illness, with extension as rapidly as possible into rural areas.
4. Establishment in each state of a medical care authority to receive and administer funds with proper representation of medical and consumer interest.
5. Encouragement of prompt development of diagnostic facilities, health centers and hospital services, locally originated, for rural and other areas.
6. Establishment of local public health units and services.
7. The development of a program of mental hygiene with aid to mental hygiene clinics in suitable areas.
8. Health education programs administered through suitable state and local health and medical agencies to inform the people of the available facilities and of their own responsibilities in health care.
9. Provision of facilities for care and rehabilitation of the aged and those with chronic disease and various other groups not covered by existing proposals.
10. Integration of veterans' medical care and hospital facilities with other medical care and hospital programs and with the maintenance of high standards of medical care.
11. Greater emphasis on the program of industrial medicine.
12. Adequate support with funds free from political control, domination and regulation of the medical, dental and nursing schools and other institutions necessary for the training of specialized personnel required in the provision and distribution of medical care.

ORGANIZATION SECTION

FEDERAL AID TO MEDICAL EDUCATION

The proposal for federal aid to medical education has again appeared on the Washington legislative scene, and as anticipated, under the cloak of national military preparedness.

Senator Murray of Montana, one of the co-authors of the compulsory health insurance bill, has introduced S. 337 providing for federal aid to medical schools. Its companion bill, H.R. 1781, has been introduced in the House by Congressman Klein of New York. Both bills are identical.

These two bills would amend the Public Health Service Act and Vocational Education Act of 1946. They would provide an emergency five-year program of grants and scholarships for education in the fields of medicine, osteopathy, dentistry, dental hygiene, public health and nursing professions.

Incidentally, the upper house version is sponsored by all the Democratic members of the Senate Labor and Public Welfare Commitee. It is this committee that will hold hearings on the bill. The House bill has been referred to the Committee on Interstate and Foreign Commerce.

The new bill is practically identical with S. 1453 which was passed by the Senate during the last session. The House did not take action on it.

In its declaration, the bill states that federal subsidies to medical schools are needed to meet immediate and prospective medical manpower requirements of the armed forces. Where the old bill provided federal assistance up to 40 per cent for total cost of instruction, the new measure stipulates up to 50 per cent.

Under the section dealing with federal appropriations, $25,000,000 would now be available for construction and equipment as compared to $5,000,000 in the old bill. Allowances to schools per student remain the same. The schools would receive $500 for each student up to average enrollment and an additional $500 for each student above the average figure. The other major clauses remain the same.

As pointed out to you earlier, the American medical profession has opposed this bill because of the control it would give the federal government in the administration of the nation's medical schools. These fears remain.

Since the bill is sponsored by all the Democratic members of the Senate Committee on Labor and Public Welfare, it would do no good to write them. But you should write your views to each of the Republican members, c/o Senate Office Building, Washington, D.C. They are: Senators Robert Taft, George Aiken, H. Alexander Smith, Wayne Morse, Irving Ives and Richard Nixon. The names of the House Committe on Interstate and Foreign Commerce are too many to list, so all correspondence should be addressed to the Chairman, Mr. Robert Crosser (D., O.).

MOBILIZATION VS. WELFARE STATE

President Truman submitted his budget to the Congress shortly after the first of the year which called for expenditures of $71.6 billions in the fiscal year ending in June 1952. This would represent an increase of 78 per cent over the budget ending last June.

In spite of this tremendous tax increase for national mobilization, he called for the passage of his entire Fair Deal program, including socialized medicine. Should even one-half of the Welfare State proposals be enacted into law, it would add untold billions to the taxpayers' already staggering load.

The President's demand for compulsory health insurance has not receded — he's merely given it a new shake. He now hopes that military preparedness will serve as a "Trojan war horse" for all his welfare schemes. Here's his new angle on compulsory health insurance:

"We need to fill important gaps in our social insurance system by providing protection on a prepaid basis against the costs of medical care and loss of family income in cases of disability. This measure will help to provide that material security which is essential to a vigorous democracy and a highly productive labor force."

And for federal aid to medical education, he had this to say: "We need, more than ever, prompt enactment of legislation that will help to increase enrollment in medical schools, by assisting them to meet their costs of instruction and to construct facilities where needed.

Perhaps the joint statement by two Republicans—Martin and Taber—best sum up Congressional opinion on Mr. Truman's message: "The money for launching these (socialistic) schemes is brazenly sought amid trumpet calls for stronger national defense. Republican congressmen and the American people will give rearmament needs first consideration but will not stand for a huge tax increase to finance political schemes of socialist planners."

If the President's speech did nothing else, it demonstrated to the medical profession once again that the planning in Washington on socialistic measures is still very much in progress. Help protect your medical and personal freedom. Write your representatives in Washington and let them know how you feel about all types of bills, not just those dealing directly with medicine.

THE PROCUREMENT OF PHYSICIANS FOR THE ARMED FORCES

ROY H. WHITHAM, M.D.
Chairman, Nebraska State Advisory Committee
to Selective Service
Lincoln, Nebraska

The system of procurement of physicians and allied specialists for the armed services has reached a stage in its development which makes it seem fitting that a report should be made to the professions involved in the state. These include physicians, dentists, veterinarians, and even x-ray equipment servicemen and orthopedic and prosthetic technicians. Other allied professions even including nurses may sometime be included, but for the present they are not involved; the law specifies "male persons."

Public Law 779, 81st Congress, an amendment to the Selective Service Act of 1948, approved Sept. 9, 1950 set the stage for the system. This law is unique and sets a precedent for "selection" in that it is the first time any group has been called for special registration because of their particular profession or skill. It is also unique in that it calls for the registration and induction of persons who, for the most part, can only be used in their professional capacities as commissioned officers; yet a commission must be applied for, it cannot be given involuntarily. An inductee cannot be used as a physician, dentist or a veterinarian until he has been commissioned. There are, therefore, problems in using the full force of the law. Its effect, for the most part, will be to encourage registrants to apply for and to receive commission in the proper corps. It is hoped that it will not be necessary to induct involuntarily a single physician, dentist or veterinarian. Physicians or dentists who are commissioned in the Reserve components prior to induction, whether called to active duty with or without their consent, are entitled to the $100.00 per month bonus provided by another law.

The law provides that "The President shall establish a National Advisory Committee which shall advise the Selective Service System and shall coordinate the work of such State and local volunteer advisory committees as may be established to cooperate with the National Advisory Committee, with respect to the selection of needed medical, dental and allied specialist categories of persons. . . . The members of the National Advisory Committee shall be selected from among individuals who are outstanding in medicine, dentistry, and the sciences allied thereto, but except for the professions of medicine and dentistry, it shall not be mandatory that all such fields of endeavor be represented on the committee."

"In the performance of their functions, the National Advisory Committee and the State and local volunteer advisory committees shall give appropriate consideration to the respective needs of the Armed Forces and of the civilian population for the services of medical, dental, and allied specialist personnel; and, in determining the medical, dental, and allied specialist personnel available to serve the needs of any community, such committees shall give appropriate consideration to the availability in such community of medical, dental, and allied specialist personnel who have attained the fifty-first anniversary of their birth."

Dr. Howard A. Rusk was appointed chairman of The National Advisory Committee, and Dr. Leo J. Schoeny the Dental member. After consultation with officials of the Nebraska State Medical Association, Dr. Roy Whitham of Lincoln was appointed chairman of the Nebraska State Advisory Committee. In like manner, Dr. Ralph Ludwick, Sr., was appointed the Dental member. The State Director of Health, Dr. Frank Ryder was appointed a member. In each state a similar committee was appointed. The chairman then, in like manner, appointed Dr. E. P. Anderson as Veterinary member, and his appointment was approved by the National Advisory Committee.

It was determined by the State Advisory Committee to appoint three subcommittees, one representing each of the three professions. The three State Associations were asked to submit nominations of enough persons to represent all areas and groups in the state. The subcommittees, so nominated, were all appointed and a member of the State Advisory Committee met with each one to explain its duty and function and to outline broad policies and procedures. The names of the subcommittees have not been published. They have been instructed to make no contact with the local boards. The local board's contact with the committee is only through the State Advisory Committee. The State Advisory Committee placed the responsibility of determining the essentiality of each registrant squarely upon the subcommittee of his own profession. It promised not to overrule the subcommittee; in case of question of improper determination either technically or because of apparent violation of policy, it was agreed to resubmit the name for discussion and reconsideration.

The modus operandi of the State Advisory Committee and its subcommittees was determined early. Contact and liason were made with the State Director of Selective Service. His cooperation is vital to the program and we are fortunate in having an official, Brig. General Guy N. Henninger, who has at all times given complete cooperation. The State Director has directed each local board, which has the eventual responsibility for classification of every registrant, to submit to him a request for advice concerning essentiality of each special registrant. That request is then sent to the chairman of the State Advisory Committee who refers it to the subcommittee through the proper member of the State Advisory Committee. Action is taken on the request by the entire subcommittee in open meeting, and then the advice is returned to the State Advisory Committee which, in open meeting, approves the advice and refers it to the local board through the State Selective Service Director. Technical or policy errors would be sent back for reconsideration. The local board then has the duty of deciding on the registrant's classification and notifying the registrant and the State Director of Selective Service. Within a limited time the registrant may appeal his classification to a State Appeal Board whose action is generally final.

What would happen if the local board does not agree with the advice of the State Advisory Committee? The State Advisory Committee has agreed to reconsider its advice on any case if the local board so requests in writing and submits in writing evidence justifying such reconsideration. In such a case the action would be taken in the same way as if submitted primarily. If the local board classifies a registrant contrary to the advice of the State Advisory Committee, and if the registrant does not appeal the classification, then the State Selective Service Director has the power of appeal to the State Appeal Board. Such action can be expected in this state. The State Advisory Committee has no power of appeal.

In summarizing the organization of the Selective Service System certain facts are worth repeating. Great responsibility and authority are vested in the Local Selective Service Boards; theirs is the decision regarding classification and, therefore, induction of registrants. The individual registrant has certain important rights, including the right of appeal from the classification of the Local Board. The Advisory Committee to Selective Service has no ultimate authority; they are purely advisory, but their advice must be given consideration.

Public Law 779 directs the President to register and induct persons in a certain order of priority. In the first priority are those A.S.T.P. or V-12 students, or those deferred from service to pursue their studies who had less than 90 days service subsequently. In the second are the same persons who had more than 90 days service and less than 21 months subsequent to graduate. These persons were the ones required to register first. (The law and proclamation are in more detail). The Selective Service System has interpreted the law to mean that all available persons in Priority I shall be exhausted before inducting persons in Priority II and so on to Priority III, which consists of those persons with no service subsequent to Sept. 16, 1940 and thence to Priority IV, those with active service. Thus it is evident that those in the first priorities may expect to be inducted relatively soon, if they do not voluntarily apply for commission. It is estimated that all available persons in Priority I will be exhausted either by voluntary commission or by induction before July 1, 1951.

On Dec. 27, 1950, a new action by the Department of Defense established "new procedures in selecting medical and dental reserve officers to be ordered into active military service and in developing requirements for these categories of personnel." "The National Advisory Committee to the Selective Service System, through its state and local committees, will advise the military services on the civilian essentiality of medical and dental reserve officers of the Army, Navy, and Air Force. Those officers who are members of Organized Reserve Units are not to be considered by the National Advisory Committee." This action puts a new responsibility on our committee, which it is felt can be handled by the same general techniques used in handling registrants under Selective Service. Thus, the Reserve Officer can probably be held for essential civilian service on the same basis as the registrant who is not a Reserve Officer.

It is to be understood that what has been here written represents the best opinion of the author based on material and verbal announcements available to him. It is not to be construed as an official statement from the Selective Service System or from the Department of Defense. It is hoped that it will be useful to the physicians, dentists, and veterinarians of Nebraska and to any other persons involved. The Nebraska Advisory Committee is doing its best to balance the needs of the civilian population and of the Armed Services. It particularly regrets that it is necessary to take persons from civil life who are important to their communities and their institutions.

Speech defects ranging from simple articulatory cases of "baby talk" to severe cases of stuttering and cerebral palsy, affect 5 to 10 percent of all the school children in Nebraska, according to Harlan H. Adams of Lincoln, speech clinician of the University of Nebraska.

Adams conducts off-campus courses in speech correction, with the cooperation of the Nebraska Society for Crippled Children, whose Easter seal sale this month helps finance the courses. More than 500 teachers and 468 speech-handicapped children have attended. Parents too often enroll.

Tecumseh, Columbus, Blair, Albion, Fullerton and Osceola plan courses in the near future.

ANNOUNCEMENTS

The Bryan Memorial Hospital of Lincoln is celebrating its twenty-fifth anniversary March 27, 1951.

An excellent medical program is being arranged. Doctors from all areas of the state are cordially invited to attend.

THE ANNUAL SESSIONS
will be held
APRIL 30 TO MAY 3, 1951
PAXTON HOTEL, OMAHA
MAKE YOUR HOTEL RESERVATIONS NOW!

The A.A.G.P. will present the following program at the April 12, 1951 meeting in Lincoln, Nebraska, at the Lincoln Hotel:

9:00 Registration.

9:30 Dr. John D. Hartigan, "Problems of Thrombo-Embolic Diseases."

10:30 Dr. Harry E. Mock, "Skull Injuries."

11:30 Dr. Charles W. McLaughlin, "Management of Burns."

12:30 - 2:30 Luncheon and Business Meeting.

2:30—Dr. James K. Stack, "Barnyard Fractures or Management of Uncomplicated Fractures."

3:30 Dr. J. Hewitt Judd, "Common Eye Conditions and Their Management by the General Practitioners."

6:00 Social Hour.

7:00 Dinner. Dr. Frank Murphy, Guest Speaker.

12:00 Noon Ladies Program. Luncheon and Door Prize.

The American College of Surgeons extends a cordial invitation to the physicians and surgeons in Nebraska to attend a three-day Sectional Meeting of the American College of Surgeons in Denver, Colorado, on April 5, 6 and 7. On the first day of the meeting, April 5, the hospitals in Denver will put on an excellent day of clinics.

The program at the Cosmopolitan Hotel, April 6 and 7, will consist of several new surgical motion pictures, papers, panel discussions and symposia.

A five dollar registration fee will be required, except from Fellows and members of the Junior and Senior Candidate Groups of the College, and interns and residents. The Fellows of the College in Denver will give full cooperation in assisting Nebraska physicians and surgeons to take full advantage of this excellent meeting if they will come to Denver on April 5, 6 and 7.

Wayne State Teachers' college has set the date for its second annual remedial speech clinic and camp, to be held on the campus August 6 to 22, 1951. Miss Alice Liljegren, Omaha speech therapist, will head the list of instructors. Applications may be obtained from the dean.

Children with speech handicaps are eligible to enroll. Living facilities will be provided on campus. Seventeen boarding children and 15 day students were accommodated last year.

Cooperating in the project are seventeen Northeast Nebraska county committees of the Nebraska Society for Crippled Children, whose Easter seal sale, now in progress, provides the funds.

NEWS and VIEWS

According to Lt. Col. Frank O'Connell, deputy selective service director, 793 Nebraska physicians, dentists and veterinarians registered in the nation's second medical registration.

Selective service headquarters had estimated 500 would register in Nebraska. The registration, held in January, was for those specialists under 50 years of age who did not register Oct. 16 in the first registration, and who do not belong to any reserve units.

Officials of the Buffalo County Medical Association have announced the local Elks Lodge has donated $900 for the purchase of a refrigerator for a permanent blood bank.

The American Medical Association is urging the public to take time out each Sunday afternoon at 5:30 to hear the program, "America Speak Up."

Capt. Jesse W. Miller, a Navy doctor and his wife, Velma, died Febr. 2 as fire swept their Government quarters at the United States Naval Hospital at Charleston, S.C.

Captain Miller, 48, executive officer at the hospital, was a native of Denton, Neb., and was graduated from the College of Medicine of the University of Nebraska. Mrs. Miller was a native of Nehawka, Neb. Two children, Jack, 17, and Suzan, 19, were not home when the fire started.

The drive by the Nebraska State Medical Association from Nov. 12-18 found about 300 diabetics who were unaware they had the disease.

Newman Grove dedicated its new, modern hospital at services Sunday, Jan. 14 at 2 p.m.

The $16,500 structure was promoted by the Newman Grove Commercial club and financed by subscription of the people.

WOMAN'S AUXILIARY

Plan to attend the 26th Annual Meeting of the Woman's Auxiliary on these dates: April 30, May 1, 2 and 3. The program has been fully mapped out by the chairman, Mrs. Leroy W. Lee, and her committee. Watch next month's Journal for the details. The highlights are: Guest speaker, Mrs. Theodore E. Heinz, National Chairman of the Public Relations Committee; tour of Joslyn Memorial Art Museum, followed by a tea; luncheon and style show at the Blackstone Hotel. Headquarters will be at the Hotel Paxton.

MONTHLY REPORTS

The Lancaster Medical Auxiliary met for a 1 o'clock luncheon February 5 at the home of Mrs. James M. Woodward, 2132 South 24th Street. Our guests of honor for the day were Mrs. Glenn D. Whitcomb of Omaha, President of the State Auxiliary, and Mrs. Isaiah Lukens IV, of Tekamah, State Program Chairman. Since it was National Child Dental Health Day, Dr. Earl Lampshire of the Lincoln Dental Society spoke on the progress being made in the prevention and control of dental disease.

Fifteen members were present Wednesday evening for the February 7th meeting of the Adams County Auxiliary at the Hastings State Hospital. Following a dinner for both the society and the auxiliary, a review of "The Deepening Year" by Mabel Louise Robinson was presented by Mrs. Wendall Bohling. The statewide essay contest was discussed, and a report given on the entertainment sponsored for the Mary Lanning student nurses.

MID-YEAR REPORTS

Scotts Bluff County Medical Auxiliary: For the most part, there have been joint dinner meetings with the men at the Scottsbluff Country Club. Attendance ranges from nine to sixteen with usually two or three guests, depending on the weather. Many of our members have considerable distance to drive on roads often closed by drifts and ice.

Programming has included Miss Martina Nelson, Superintendent of Methodist nurses, twice. Dr. J. D. McCarthy of Omaha spoke on "Paramount Issues" relative to Socialized Medicine. We also heard representatives of the press and radio where closer association of these media with the medical profession, was discussed. We had a film on Self-Examination for Breast Cancer. We then publicized availability of such film for other groups through us.

Our projects included donations of $15.00 each to the West Nebraska Methodist Nurses' Home and St. Mary's Hospital; aide to the Nurses' library; support for the nurses' scholarship drives; scrapbooks for the children's wards of both hospitals; and packing of food and gift baskets at Christmas for needy families.

Also in January, Mrs. Glenn D. Whitcomb, State President, paid us a visit and spoke to us about attending the National Convention and other pertinent auxiliary activities. She is the first state official to visit our group.

Nemaha and Otoe: Ours is a new auxiliary, and therefore considerable time has been spent on organization. Mrs. Kenner was appointed chairman of the Speakers' Committee to secure speakers from the Bureau of Lincoln to talk on socialized medicine. Speakers were secured for the P.T.A.; The Mariners' Club (young married people's organization of the Presbyterian Church), and the VFW. Arrangements were also made for Mr. Smith to speak in Auburn to the Woman's Organization. We have organized a study program. Mrs. D. D. Stonecypher gave a report on "A Study of the Medical Association, its Committee and Councils."

Buffalo County: Ours is a new group. We meet once each month for dinner with our husbands at the Fort Kearney Hotel in Kearney. The programs have been as follows: September: A movie on the Ear by Dr. M. B. Wilcox of Kearney. October: A report on Cerebral Palsy by Mrs. John S. Anderson of Grand Island. A subscription selling campaign for "Today's Health" was undertaken. November: A report on City Sanitation by Mrs. Dan A. Nye of Kearney. Also a report on the history and development of Blue Cross and Blue Shield by Mrs. B. R. Bancroft of Kearney. February featured a book review, "Cry The Beloved Country," by Mrs. L. D. Lane of Kearney.

Fillmore-Saline County Auxiliary: Monthly meetings have been held at Friend, Nebraska, except for the December meeting which was held at Crete. Attendance ranged from five to nine. Programming has featured Legislation; Dr. Aksamit, a dentist from Crete, who spoke on "Dental Hygiene in Children;" the nurse recruitment program; and the state essay contest. Our new officers are: Mrs. R. W. Homan, President; Mrs. F. G. Travnicek, Vice President, and Mrs. R. K. Johnson, Secretary-Treasurer.

Madison 6th County: Because our auxiliary covers such a wide area and winter driving for long distances almost impossible, we decided to concentrate on correspondence rather than our monthly meetings to enlist help on projects. We launched our Essay Contest that way and had a wonderful response from all the women through the six-county area. At our meetings, we simply have a round table discussion on any new material we have been sent or which the members have picked up in the newspapers and magazines. This material we brief and send along to all of our people in the six-county area.

8th Councilor District: A December meeting was held at the home of Mrs. R. R. Brady. Eight members and one guest were present. This was a joint meeting with the doctors, at which time Doctors Redgwick and Lenhoff spoke. Dr. Charles Sheets of Cozad addressed both meetings concerning the Essay Contest. Our district is spread over a large territory consisting of small towns supporting only two, three, or four doctors. We feel that our attendance of eight was very good.

Omaha-Douglas County Auxiliary: The membership tea was held October 10 at the Nebraska Phi Chi Chapter house, Mrs. Leroy W. Lee presiding. Mrs. Glenn D. Whitcomb was a guest speaker, as were Doctors Howard and Brush, who spoke about the newly formed Healing Arts Committee. They called for volunteers to staff the office until Election Day. About 100 members attended the meeting. The second meeting was a Christmas luncheon at the home of Mrs. H. H. Brinkman. About 40 members attended and heard a program of organ music by Mrs. Howard Rushton. The last meeting was held February 13 at the Omaha Athletic Club, at which Mr. S. Bradley, from the Executive office, presented an informative talk on the organizational structure of the AMA.

Mrs. R. E. Garlinghouse, chairman of the Essay Contest, announces the following judges: District No. 1: Rev. Harold T. Janes; Harry B. Cohen, Attorney; John Schuetz. District No. 2: James E. Lawrence, Editor of Lincoln Star; Rev. David Gracey; Clarence A. Davis. District No. 3: Not reported. District No. 4: Jerry Huse, Asst. Publisher Norfolk Daily News; Donald D. Mapes, Attorney; Rev. E. G. Brinkmeyer. District No. 5: Lester A. Walker, Editor Fremont Guide and Tribune; Rev. Frederick Muller; Robert Flory, Attorney. District No. 6: Rev. John P. Brooks; Al C. Huber, Editor York Daily News; John Riddell, Attorney. District No. 7: Howard W. Hamilton, Attorney; John C. Gewacke, Attorney; Monsignor John Ekeler. District No. 8: Rev. Ray Haun; G. A. Farman, Jr., Attorney; Mrs. Jack Crook. District No. 9: Arch Jarrell, Editor Grand Island Daily Independent; Walter P. Lauritsen, Attorney; Rev. Wm. E. Craig. District No. 10: Mr. Ralph G. Brooks, Superintendent of Schools, McCook; Fred Hansen, Attorney; Rev. R. W. Fowkes. District No. 11: Rev. Donald Springer; George B. Dent, Attorney; Walter E. Buechler, publisher. District No. 12: Herbert Thies, Star Herald, Scottsbluff; Rev. Ditton; Harold Gantz, Attorney.

MRS. G. KENNETH MUEHLIG,
State Publicity Chairman.

CIVILIAN CONSULTANTS AID ARMY MEDICAL PROGRAM

Three civilian physicians have accepted appointments to committees of the Society of U.S. Medical Consultants in World War II, which will assist in providing medical consultation of the highest order to the Army Medical Service, both in the United States and overseas. The committees were appointed at a meeting of the society's advisory board in the office of Major General R. W. Bliss, Army Surgeon General, recently.

Heading the committee which will concentrate on advising on assignment of consultants for Army hospitals in the United States is Dr. Joseph M. Hayman, Jr., of Cleveland, Ohio. The overseas committee chairman is Dr. Alfred R. Shands, of Wilmington, Delaware. The only other doctor so far appointed is Dr. John B. Flick, of Philadelphia, Pennsylvania, who will fill the general surgery position on the overseas committee.

The Civilian Personnel Branch of the Army Surgeon General's Office announces vacancies for one Medical Officer (Director of Public Health and Welfare) in Okinawa and nine Public Health Officers in Japan. All of these positions have to do with the care of civilian population. Applicants must be Doctors of Medicine with public health and welfare experience. There is no age limit.

The opening in Okinawa calls for a GS rating 15 and pays $10,000 per year plus 25% post differential, a total of $12,500.

The openings in Japan call for a GS rating 13 and pay $7,600 per year, plus free quarters which include furniture and maid service.

Doctors wishing to make application for these positions or further information concerning them should write to Civilian Personnel Branch, Army Surgeon General's Office, Main Navy Building, Washington 25, D.C.

NEBRASKA STATE DEPARTMENT OF HEALTH

THE HEART PROGRAM

The Division of Health Education, State Health Department, has answered many requests for material on rheumatic fever and heart disease. The pamphlets distributed are those recommended by the American Heart Association and our State Medical Society.

Two films, "Be Your Age," and "The Heart and Circulation" are widely used by College and University groups and civic groups. The second one is also used in high school science groups.

Speakers who address civic groups explain the service, and make these materials available to those present. In this way thousands of informative pamphlets have reached citizens in Nebraska.

THE SCREENING TESTS

The teachers are instructed in how to give the simple screening tests to school children. These are mainly distance tests for vision and hearing, in order to know whether each child can see the blackboard and hear the teacher's voice. The teacher's observation is reported to parents, many of whom follow through and take Johnnie for a complete medical examination.

The teacher must know something about a child's handicaps if she is to help him progress in school, and the parents need to recognize or to be told of a child's handicaps before they will see the necessity for a medical examination.

The goal to work toward is a medical and dental examination each year, for every child, in the offices of the doctor and the dentist, where the child's problems can be discussed with the parents.

Last year the Health Department heard from 69 counties on screening tests and doctors' examinations. This year 90 counties have sent in reports. Examinations by physicians are reported to the number of 24,288. Others were given through the year as teachers emphasized to parents the needs of the individual child.

At the end of last school year these corrections of remediable defects were reported: eyes, 5,699; ears, 1,000; nose and throat, 2,665; teeth 18,550; and others, 847. Immunizations reported were 4,599.

Certain gains are made each year, but the goal is still a long way ahead.

THE SAFETY PROGRAM

Safety education in school and home is being emphasized in the schools this year. Consultant services and materials are available from the State Health Department. Two bulletins on safety have been developed to help the grade, rural and high school teachers plan their safety programs.

THE TUBERCULOSIS SURVEY PROGRAM

Last year the three x-ray units owned and operated by your State Health Department took 94,126 x-rays in 137 different locations. These included 34 counties and 11 special surveys, such as colleges, universities and industries. There have been over 450,000 x-rays taken since the beginning of the program in 1944.

In last year's findings of abnormalities there were 116 cases reported as characteristic of tuberculosis, past or present, or one-tenth of one per cent; and 301 cases, with findings suspicious of tuberculosis, past or present, or three-tenths of one per cent. The total percentage of abnormalities for all types of cases was 2.4 which is well under the national average.

THE FILM PROGRAM

The professional, school, and community groups make wide use of the film library. Last year the film audience in the state reached 280,000. In January 1951, 275 films were requested, and shown 646 times; total audience, 26,310.

DEATHS

Dr. George Arthur Heath, Fairbury. Retired. Born in Ohio in 1873. Moved with his parents to Geneva, Nebraska, in 1884. Graduated from Illinois Medical College in 1897. Following an internship in Cook County Hospital, he located in Daykin, Nebraska. In 1907 he moved to Fairbury where he remained until his retirement recently. Dr. Heath enjoyed an unusually successful practice. He was prominent in civic and fraternal activities. He was a member of the Jefferson County Medical Association and the Nebraska State Medical Association. Died January 26, 1951. Surviving are his wife, one son and one daughter.

Dr. Eugene E. Clark, Lincoln. Born in Peru, Nebraska, in 1893. Graduated from Jefferson Medical College in 1920. From 1921 to 1930 he practiced at Burwell. He then moved to Ashland and in 1942 he moved to Lincoln, where he remained until the time of his death, January 9, 1951. Dr. Clark was active in civic and professional affairs and took an unusual interest in the Lions Club and the Scottish Rite. He was a member of the Nebraska State Medical Association and the American Medical Association. Surviving are his wife, a son, and a daughter.

Buy U.S. Saving Bonds

KNOW YOUR BLUE SHIELD PLAN

A copy of the new Blue Shield booklet, "Schedule of Benefits and Instructions to Physicians" has been mailed to all Nebraska physicians. Additional copies have been mailed to those doctors who have requested them for their secretaries. Any physician who did not receive his copy is requested to notify Blue Shield, 518 Kilpatrick Building, Omaha.

Members of the Blue Shield Liaison Committees of the county medical societies have been invited to attend a one-day conference in North Platte on March 15. Basic information about Blue Shield operation will be presented, and it is hoped that at least one Liaison Committee member from each county society will be in attendance.

Blue Cross and Blue Shield in Nebraska each exceeded the million-dollar mark in benefit payments during 1950. Blue Cross payments to hospitals totaled $1,513,110 for the 27,355 hospital cases handled during the year. This exceeds by $326,354 the amount paid to hospitals in 1949. Blue Shield last year passed the million-dollar figure in benefits, paying physicians $1,100,610 for the 36,413 services rendered to Blue Shield members in 1950. This represents an increase of $104,763 over 1949.

SPECIAL NON-GROUP ENROLLMENT IN APRIL

Anyone under 65 may make application for Blue Cross-Blue Shield membership during the month of April, when another special Non-Group enrollment campaign will be conducted. During the thirty-day period, all persons, regardless of employment status, may apply for membership in the hospital and medical service Plans. After the close of the campaign, the regular Non-Group enrollment requirements will again go into effect. Newspaper ads with coupons will be published throughout the state, and all physicians and hospitals will receive a supply of promotion folders for distribution to patients. This offering of membership on a virtually unrestricted basis will enable many who are ordinarily ineligible to enroll. Doctors will do their patients a service by mentioning the availability of membership during April.

STATEMENT OF INCOME AND EXPENSE

January 31, 1951

Income:		
Dues	$142,020.50	
Enrollment fees	1,151.00	$143,171.50
Claim Expense:		
Claims Paid	$188,556.00	
Less: Unreported, 1-1-51	128,517.12	
Pending, 1-1-51	1,944.00	
Plus: Unreported, 1-31-51	122,502.12	
Pending	7,464.00	
Claims Incurred		$118,061.00
Administrative Expense:		
Collection Expense	$ 187.03	

Professional — Medical	250.00	
Advertising — B.S. Only	32.00	
Printing	2,556.75	
Postage	134.00	
Dues	144.42	
Payroll Taxes	6.25	
Payment to B.C.—		
Regular	11,588.89	
Advertising	362.80	
Bonus Expense	300.00	
Conferences and Meetings	155.30	
Salary, Secretary	416.67	
Miscellaneous	12.00	
Total Administrative Expense		$ 16,146.11
Gain from Underwriting		$ 8,964.39
Miscellaneous Gain or Less Items:		
Plus—Decrease in Maternity Reserve		1,649.70
Gain or Loss to Surplus		$ 10,614.09
Surplus, 12-31-50		$123,326.77
Surplus, 1-31-51		133,940.86

BALANCE SHEET

January 31, 1951

Assets:		
Cash in Banks	$193,336.22	
Premiums in Process of Collection	19,276.80	
U. S. Bonds	349,950.50	
Accrued Interest on U. S. Bonds	3,618.53	
Total Assets		$566,182.05
Liabilities, Reserves and Surplus:		
Accounts Payable, Blue Cross	$ 11,951.69	
Accounts Payable, Monthly Invoices	2,704.05	
Accrued Payroll Taxes	81.30	
Claims Reported but Unpaid (Pending)	7,464.00	
Unearned Premiums	133,296.03	
Total Liabilities		$155,497.07
Reserves for:		
Unreported Claims	$122,502.12	
Maternity Care	152 442.00	
Bonuses	300.00	
Collection Losses	1,500.00	
Total Reserves		$276.744.12
Unassigned Surplus		$133,940.86
Total Liabilitites, Reserves, Surplus		$566,182.05

ENROLLMENT SUMMARY

January, 1951

Groups enrolled during January	23
Groups cancelled during January	17
Number of active groups, February 1, 1951	2,975

	Subscribers	Dependents	Participants
Membership, January 1, 1951	62,527	86.913	149,440
Additions	1,115		
Less Terminations	1,352		
Net Loss	—237		
Membership, February 1, 1951	62.290	86.583	148,873

CASE REPORT

January, 1951

Number of Services Rendered	3,754
Females	2,153
Males	1,601
Subscribers	1,331
Dependents	2,423

Dr. Thomas F. Dougherty of the University of Utah Medical College participated in the Rheumatism and Arthritis Panel held at the annual meeting of the American College of Allergists. He stressed the point that treatment of allergic diseases with ACTH and cortisone ameliorates the symptoms, but does not correct the factors responsible for the disease.

Tissue and glandular changes which result with continuous use of cortisone or ACTH, as observed in experimental animals, were discussed in detail. He presented a method by which one can evaluate concentration in the tissue of adrenal cortex secretions. This information permits the estimation of the allergic status of the individual.

SOCIETIES

Secretaries of county and district societies are requested to send in the minutes of their meetings to The Editor, Mezzanine No. 3, Medical Arts Building, Omaha.

Dr. F. M. Bell of Grant was elected president of the Garden-Keith-Perkins Counties Medical Society at the annual meeting in Ogallala. Dr. Bell succeeds Dr. Willard Seng of Oshkosh.

Other newly elected officers of the society are Dr. S. M. Weyer, vice president and Dr. S. K. Imes, secretary-treasurer. Dr. John L. McFee is the retiring vice president and Dr. George M. Horner is the retiring secretary-treasurer.

The business meeting was held in the DeLuxe Cafe. Date of the February meeting will be announced.

Dr. J. C. Gillispie of Falls City has been named president of the Richardson county medical association to succeed Dr. S. D. Cowan.

Other officers named were: Dr. Harlan S. Heim, Humboldt, vice president, and Dr. C. L. Hustead, Falls City, secretary and treasurer.

The election followed a dinner meeting at Hotel Weaver in January.

Physicians of the Tri-County Medical Association attended a consultant meeting early in January at the Veterans hospital. Forty-two were present for illustrated medical and surgical lectures.

Speakers were Russell R. Best, professor of surgery, and Dr. Joseph D. McCarthy, associate professor of medicine, both of the University of Nebraska School of Medicine.

The subject was "Ulceration of the Stomach," with Dr. Best presenting the surgical and Dr. McCarthy, the medical phases.

Physicians present included the consultant and attending staffs of the local hospital. Eighty-five physicians in the three counties, Hall, Howard and Merrick, were invited. Presiding at the meeting was Dr. J. Ralston Wells, hospital manager.

NAVY ESTABLISHING 24-WEEK COURSE FOR DOCTORS GOING ON ACTIVE DUTY

With 31 enrolled in the first class, Navy has started a new 24-week indoctrination course for doctors coming on active duty. Eventually, Navy hopes to detail all men coming on duty for the first time to this training. The bulk of newly commissioned Navy doctors currently get essential orientation with the unit or hospital to which first assigned. The plan is to substitute the new 24-week course for this on-the-job training. In contrast, new Army doctors are put through a six-week course at Fort Sam Houston, Texas, prior to assignment to units or special duty. At the start of the Korean war, Army cut its indoctrination of some doctors to as little as three days. Under the 24-week Navy course, about half the time is spent in special study at Naval Medical Center, Bethesda, the rest in field training with Marines, aboard submarines and airplanes and with amphibious units. A Navy spokesman said it would be two or three years before the full scope of the program is determined.

—From A.M.A. Washington Office.

The Nebraska State Medical Journal

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

Vol. 36 Norfolk, Nebraska, April, 1951 No. 4

EDITORIAL

THE EIGHTY-THIRD ANNUAL ASSEMBLY

On page 131 we present the scientific program for the coming Annual Session of the Association. The papers selected by our own members and those of the invited guests offer a variety of subjects which no practicing physician can afford to miss. If to these we add the symposia scheduled by the teams from Loyola and Harvard Universities it is not unlikely that the Eighty-third Assembly will break all attendance records of the past.

While the scientific discussions are the dominant functions of the Assembly the socio-economic side of medical practice also demands our thoughtful consideration. The degree to which these problems affect our professional life may be judged by reading the minutes of the mid-winter meeting of the Board of Councilors (see page 134). Interestingly, the minutes of the 1941 meeting of this board occupied less than six pages with some reports set in 10 point type. We make this observation with one aim in view: The deliberations of the Council are the business of every member of the Association, and by that token every member owes it to the Association and indeed to himself to know what is going on. He should have and be able to give an opinion on every item appearing in the minutes, and he should feel it his duty to apprise his representative to the House of Delegates of his views. Only through honest interchange of opinion between members of a democratic organization can solidarity be attained. And for free expression of our views it is difficult to think of a better medium than the Annual Assembly.

PRE-SCHOOL EXAMINATIONS

Throughout the United States steadily increasing groups are becoming interested in the examination of children about to enter school. In many communities the project is sponsored through organized effort of parent-teacher organizations or woman's clubs under the leadership of County Medical Societies and/or their Woman's Auxiliaries. The system varies with individual locale but the aim is uniform: to afford every American child the benefit of a physical check-up in order that correctable defects if discovered may be corrected prior to his assumption of class duties. In some areas the "Pre-School Round Up" is heralded by a good deal of fanfare, which though unnecessary is quite understandable in the light of our mid-century philosophy pertaining to the influence of publicity or in its more modernistic terminology—public relations.

The point is, the cause is very worth while even if it is done the hard way at times. We are interested in professional good-will, but above everything else we are desirous of helping parents obtain what medical aid their children require. In this connection we suggest that:

(a) Physicians by virtue of their training and experience owe it to their communities to exercise good leadership in behalf of the children. The method by which these preschool examinations are arranged is not nearly as important as is the number of children reached and on the carefulness of the physician or physicians doing the examining. Mass examinations obviously are of less value to the individual child than are check-ups done in the privacy of the physician's office.

(b) Regardless of circumstances under which the examination is done, the physician should constantly bear in mind the objective—to discover what defects exist and to correct those which lend themselves to correction.

We realize that the task requires much time and not infrequently a good deal of patience. Yet these youngsters require evaluation and their parents need reassurance. We know too, that children too often enter school with impediments which sooner or later manifest themselves in physical and/or mental handicaps. Who but the physician is best equipped to render these preventive services?

THE UNIVERSITY NEEDS YOUR HELP . . . NOW!

At this writing the Budget Committee of our State Legislature is holding hearings on the proposed budget for the University of Nebraska. Officials of the University maintain that the recommendation made by Governor Val Peterson, though appreciably above the funds allotted for the 1949-1951 bi-annium will scarcely cover increased expenses which resulted from spiralling prices of everything that enters into the operational costs of all institutions. There are almost no provisions for long needed improvements in the facilities for teaching medical students.

The Alumni Association is making a sincere effort to convince the legislators of the urgent need for a more liberal medical school budget, and from current reports the budget committee is lending a friendly ear. It is said that the Governor also is appreciative of the present dilemma of the Medical College. Yet these are only indications of hope. Relief can be attained only when the people actively show a desire for a good, modern medical school to train good doctors. The individual physician interested in maintaining and strengthening existing high standards of medical practice can do much to explain to his patients the functions of a medical school in the economy of our commonwealth. He is likewise in an excellent position to keep the individual legislator with whom he has personal contact, informed about the necessity of providing adequate facilities for the training of good doctors. Our Association is doing everything possible on a state level. It is hoped that every member will do his share in his own locality. The time to help is now.

All Roads Will Lead

to

THE ANNUAL ASSEMBLY

in

The Hotel Paxton

Omaha

April 30 to May 3

BE SURE TO BE THERE

See Program on Page 131

Read Council Minutes on Page 134

The Problem of Scoliosis — Its Evaluation Treatment and Prognosis*

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Lincoln, Nebraska

Scoliosis is a perplexing problem to the general practitioner, and a debatable one among those in the specialty of orthopaedics. Though each case presents an individual problem often with many complicating factors, there are some general principles which can be used as a basis of approach and these will be considered here. Hippocrates recognized scoliosis, and since his time there have been many and various devices used in attempted correction. While external support is generally not satisfactory, spinal fusion has made it possible to stabilize and maintain correction of these deformities of the spine. Use of the Risser wedging jacket introduced in 1927 has made maximum correction possible in a minimum of time. It is based on the principle that a curved rod can be more easily straightened by bending than by making traction at both ends. (Fig. 1).

Scoliosis is divided into two main classes, functional and structural. The former manifests no pathological change in the vertebral column, and being due to general muscular weakness and faulty posture, usually can be completely corrected. Of the structural group twenty per cent may be accounted for by some cause, such as poliomyelitis, congenital abnormalities, neurological diseases, intra-thoracic disease, and other conditions such as rickets. In the remaining eighty per cent, however, the causative factor cannot be determined and this group is listed as idiopathic. It is the structural group which may result in serious deformities and the rate and degree of progression is variable.

Usually, when the patient is seen, some deformity is already present, making the condition self-evident. There may be a slight elevation of one shoulder, prominence of the scapula and lateral fullness of one hip, or prominence of the ribs without subjective symptoms. (Fig. 2). This condition is frequently overlooked early, and therefore quick routine spine examination should be done on all children, especially from the years of six to sixteen. The child's back should be examined standing and with forward bending. It is also significant to obtain a family history, as at times idiopathic scoliosis may be familial. It is not, however, the diagnosis alone, but the evaluation and determination of the clinical course which is important. Actually, in early childhood and through adolescence, there usually is no complaint aside from the evidence of deformity. Intermittent complaint of fatigue and aching are the result of muscle strain. Later in the third and fourth decades, though the progress of the deformity itself ceases, the symptoms increase due to fatigue, strain and pain of degenerative ar-

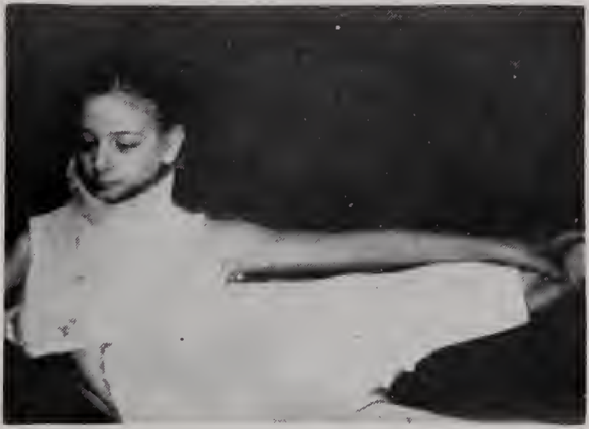
Fig. 1

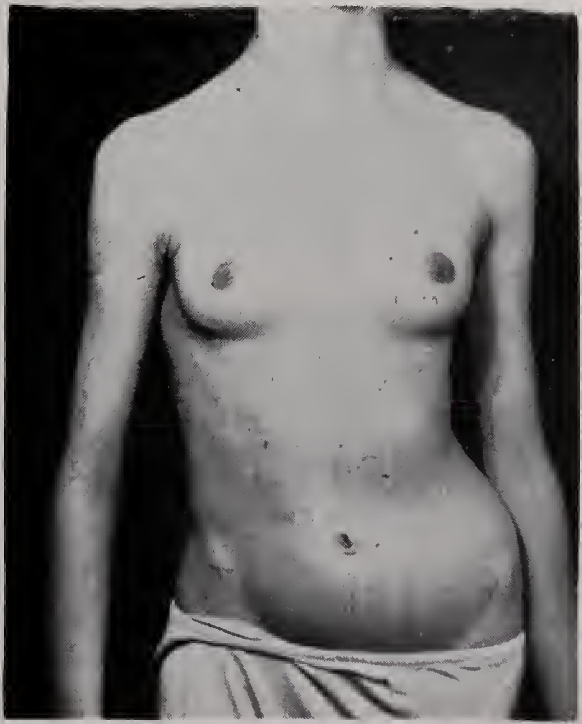
Fig. 2A

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*Read before the Annual Sessions of the Nebraska State Medical Association, May, 1950.

thritis. Flexibility of the spine may be lost rapidly after adolescence.

For the determination of the clinical course of deformity it is necessary to have a roentgenographic record in addition to physical findings. These films include lying and standing positions, which reveal relative flexibility of the spine, and lateral bending films for mobility of the curve itself. Pelvic tilt films may be taken to show the degree of voluntary muscle balance. Check films should be made at six to twelve month intervals, depending on the type of scoliosis and the course. Interestingly, well compensated curves up to thirty degrees may manifest no grossly detectable changes physically.

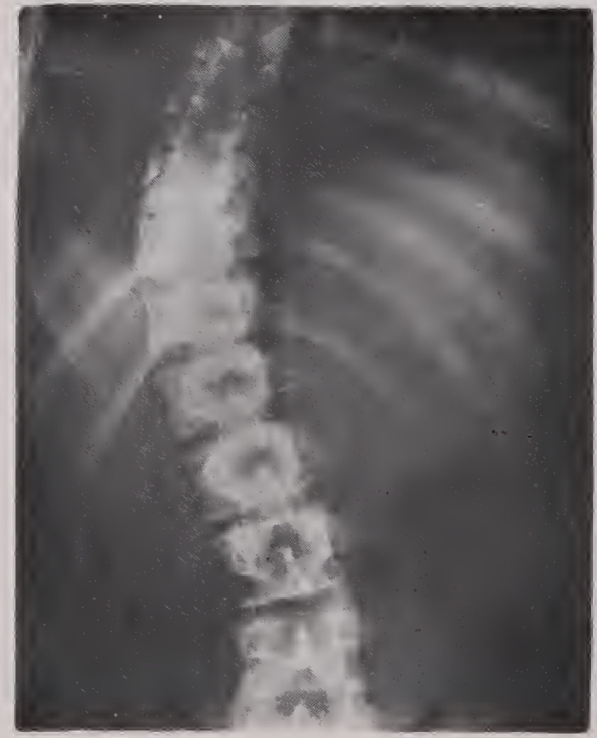

Fig. 2B

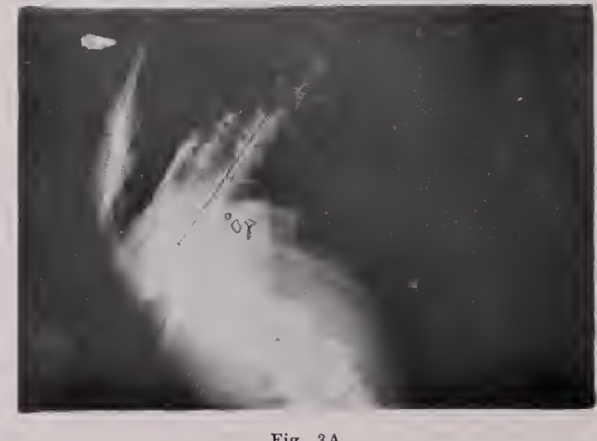

Fig. 3A

The progress of the deformity is quite variable. Definite cessation of increase in the curvature occurs only with the termination of vertebral growth. This has been brought out by Risser and Ferguson, and they have stressed the degree of ossification of the apophysis of the iliac crest as a reliable index of vertebral growth. There are also definite growth periods. The years of six to twelve in boys, and six to eleven in girls is relatively slow, and the scoliosis may remain quiet at that time. Cessation of vertebral growth occurs at the average of fourteen in females and sixteen in males. Paralytic curves, however, may show rapid development regardless of age.

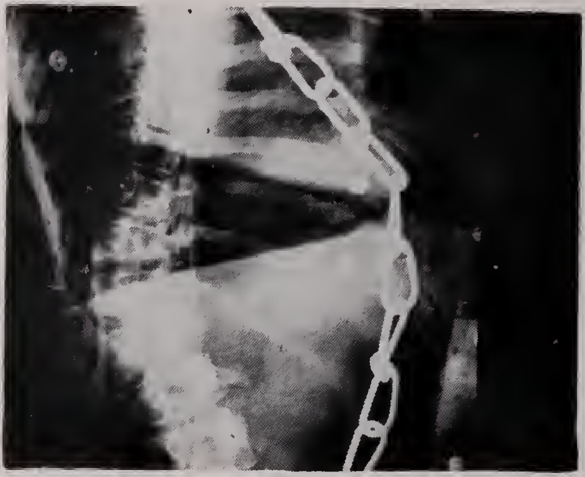

Fig. 3B

Scoliosis may be classified also by the type of curve. Generally, there are three main types, the triple curve, the C curve, and the S curve. There is a tendency for multiple curves to balance each other. Variations in curvature depend on the site and on the group of muscle imbalancing forces, in addition to static changes. Usually there is a compensatory response with development of secondary curve tending to compensate for the initiating or primary one. The compensatory curve rarely becomes as great as the primary and is the more flexible of the two and usually does not show the degree of structural change. Generally identification of the primary curve is based on the following: If there are three curves it is usually the middle. It is usually the greater curve or the one towards which the trunk is shifted. It is usually the least flexible or correctable curve. In addition to lateral deviation, rotation is associated with structural scoliosis. The bodies of the vertebrae rotate to the side of the convexity and the spines opposite. There is backward projection and increased angulation of the ribs on the convex side, and in the idiopathic form, the convexity in the thoracic region is more frequently to the right.

The general indications for treatment and spinal fusion are a rapidly progressing deformity; decomposition of the spine; symptomatic scoliosis; and cosmetic factors. The chief symptoms during adolescence are of muscle strain origin, but those in the third and fourth decades are associated with localized degenerative arthritic changes, and lumbosacral decompensation. Any evidence of advance in degenerative changes with mild symptoms, even at early age, is an indication for surgical treatment.

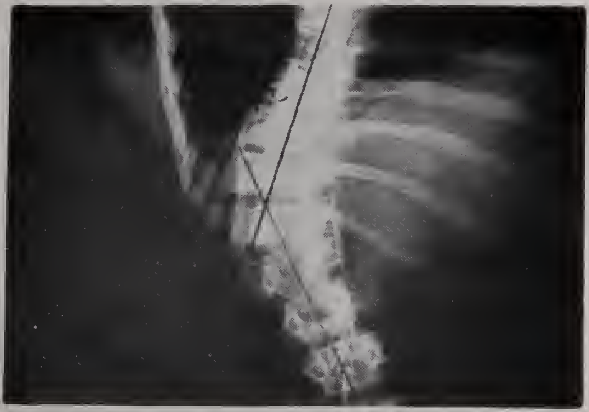

Fig. 3C

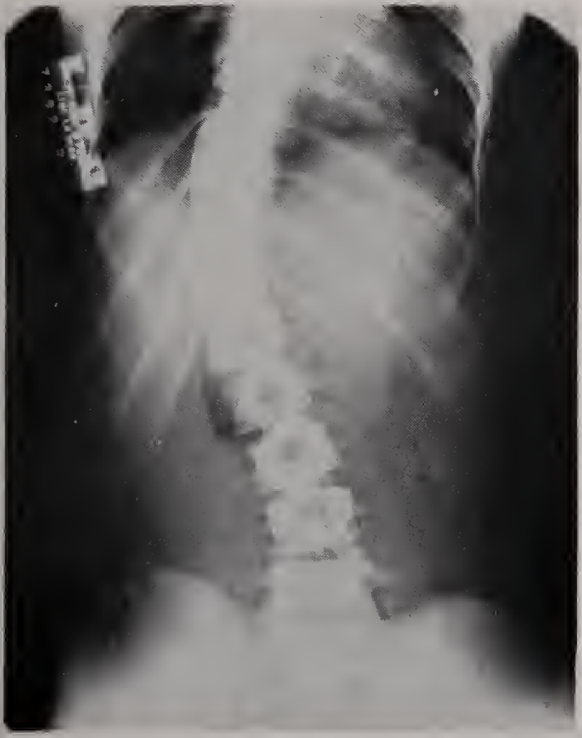

Fig. 4A

As for the conservative measures, rest and recumbency is the most significant treatment. Braces generally do not control progress of a curve and plaster jackets likewise do not prevent progession when the patient is erect. Severe deformity with rotation may take place in spite of rigid and extensive plaster immobilization in some cases of paralytic scoliosis. Exercises do not alter the course of the curve, though they do increase muscle tone, vital capacity, etc.

Idiopathic curves while constituting a majority of the scoliosis cases are to a relatively small per cent improved by operation. They stop progressing spontaneously, usually at or before fifteen years of age. While most of these are multiple curves, those with a single major one have the greater cosmetic defect.

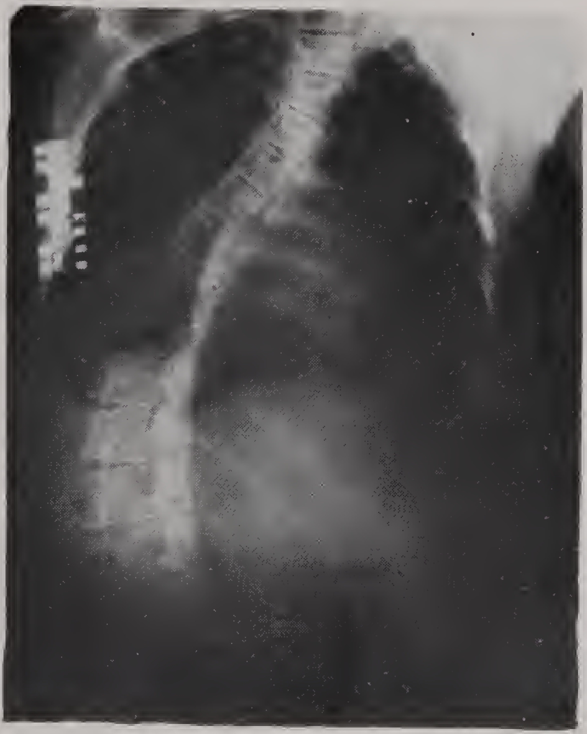

Fig. 4B

Primary cervical dorsal and high dorsal curves show an elevation of the shoulder on the convex side. There is posterior and lateral fullness of the upper chest with scapular prominence due to the position of the ribs. There is lateral displacement which is proportional to the amount of compensatory response. These curves are both unsightly and relatively inflexible. Correction is more difficult and there is also danger of brachial plexus injury. The primary dorsal curve is usually to the right and the idiopathic type has its apex in the central or lower two-thirds of the thoracic spine.

In obtaining correction, the curve is shifted to the degree of correctability spontaneously present in the compensatory lumbar curve. This depends on position, structural change, and the factor of muscle imbalance. Over-correction is to be avoided.

The primary dorsal lumbar curve usually involves about the eighth thoracic to fourth lumbar level. There is apparent elevation of the iliac crest on the concave side. There is convex side muscle prominence and lateral trunk displacement. The lower the curve, the greater the amount of decompensation, but generally the correction here is better due to the greater flexibility of this portion of the spine. Thus the lower dorsal and dorsolumbar curves show better response to corrective jackets. (Fig. 3). Some of these may extend into the pelvis with all of the lumbar vertebrae being a part of the curve, and here the lumbosacral joint stability may exert a corrective or exaggerating influence. Likewise, lumbosacral instability or developmental tilt of the superior surface of the sacrum may be a primary factor in the development of lumbar curves.

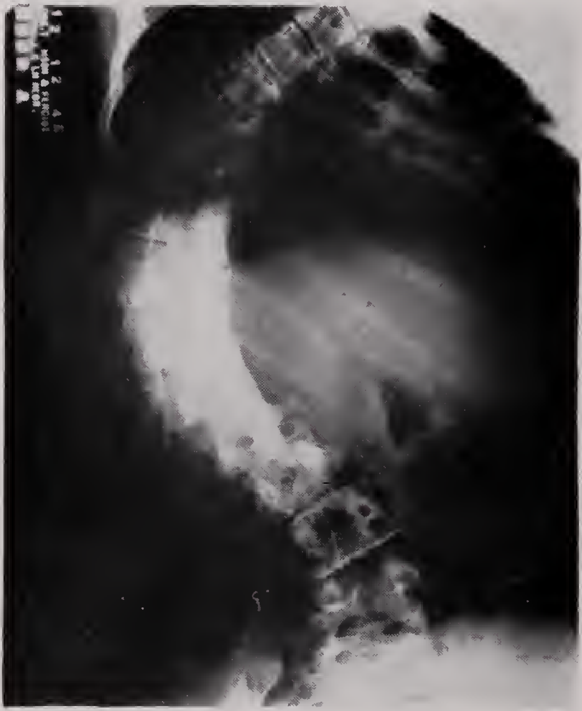

Fig. 4C

At times there is apparently a double primary due to two separate groups of imbalancing factors. These may be symmetrical or asymetrical. In cases where the asymmetry is due to the lower curve being greater, correction may require only fusion of the lower segment. If it is necessary, however, to fuse both curves, the second may be done at a later date. At times if the curves are well compensated and the scoliosis is not of too severe degree, fusion may be undertaken without any initial corrective procedure. However, in the case of moder-

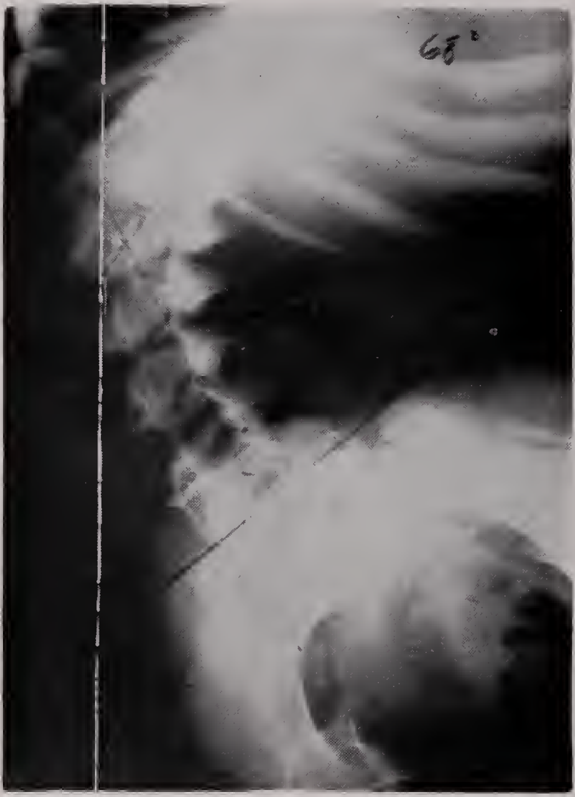

Fig. 5A

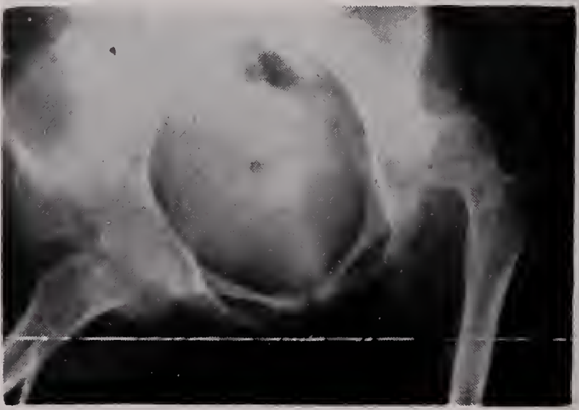

Fig. 5B

ate multiple curves, the desirability of correction depends upon many factors, such as deformity, length of fusion necessary, degree of compensation, etc.

Paralytic curves are less frequent than idiopathic, but are very important because they develop insidiously and may progress even with recumbency. They require constant check and rigid observation. Early in their development they may fluctuate in direction and in area, though later definite structural deformities develop. The onset may be soon after the acute phase of the patient's disease, or again it may not be for several years. The tripod gait, if possible, is advisable when the abdominal muscles are asymmetrically involved, and when there is also a weakness of the hip musculature. This is a precautionary measure guarding against influencing the scoliosis. Usually this scoliosis is the long C type in configuration. This may develop very rapidly to a severe degree, even in spite of quite rigid support. Therefore, correction and fusion is indicated in this type, irrespective of age if the deformity is severe and progressing rapidly. (Fig. 4).

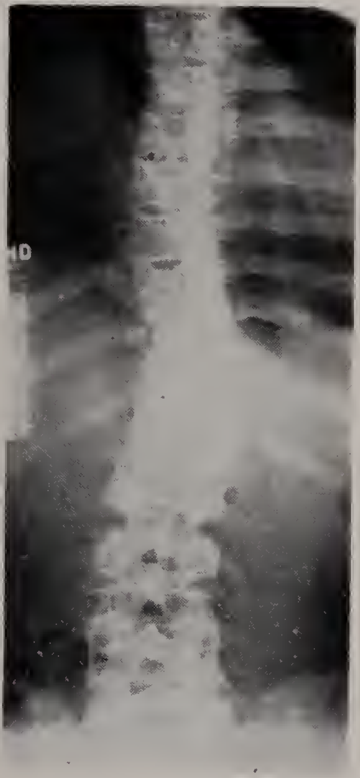
Fig. 6

Another factor which influences changes in the spine are paralytic contractures about the pelvis. Severe abduction contractures of the hip may be etiological factors in producing an exaggerated lumbar curve, and early treatment is directed towards the correction of that condition. At times, in severe paralysis, in order to have a stable base to maintain correct position, it is necessary to fuse into the pelvis. The combination of severe paralytic scoliosis requiring fusion to the pelvis associated with a fixed pelvic tilt offers a considerable problem and may require other measures, as osteotomy of the femur, in order to shift the center of gravity and alter balance and leg length. (Fig. 5).

In the case of congenital anomalies there is no basic pattern. They may be single or multiple. If they are large, they may produce rapid changes. In the case of hemivertebrae they may be symmetrically placed so that they balance one another. In the case of asymmetrically placed hemivertebrae in some cases, through continued support, they will compensate themselves during the growth period. (Fig. 6). In other cases, excision and correction must be contemplated, but this is a very formidable procedure and usually is satisfactory only in the lumbar spine. Associated multiple fusion of the ribs may require resection. Those changes associated with Sprengel's deformity usually

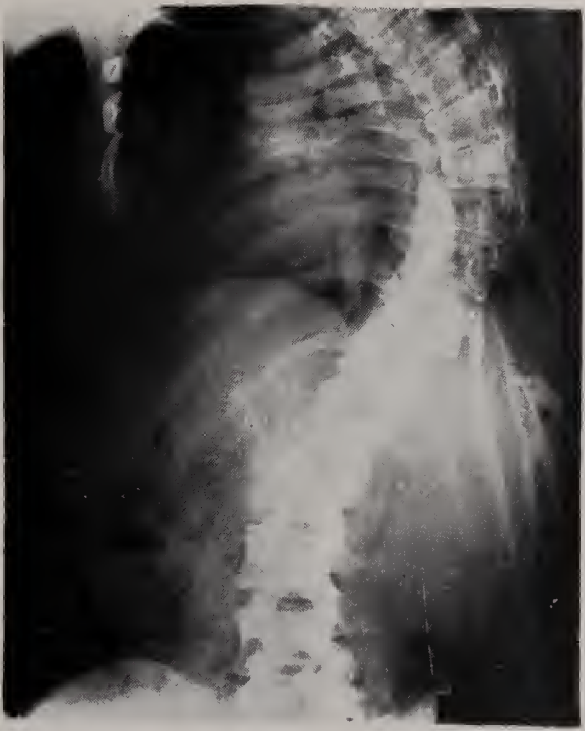
Fig. 7

do not require any treatment on the spine itself.

Other causes of scoliosis are less common but may be due to thoracogenic factors, such as empyema or thoracoplasty. (Fig. 7). The observance of cafe au lait spots on physical examination may suggest neurofibromatosis. Other conditions, such as cerebral spastic palsey rarely require surgery.

Thus, if there is no stronger contraindication, the indications for surgical intervention are: (1) a progressive curve in a young or growing child; (2) curvature with objective deformity and imbalance of the trunk, irregardless of whether or not the child is within the growing period; (3) pain and fatigue with localized degenerative changes, this being rarely indicated in patients in their teens; (4) an unstable curve in an older age group. Early recognition through routine spine examinations in children and evaluation of the deformity, if present, are factors which may prevent the development of a severe disfigurement or avoid unnecessary concern and treatment.

ILLUSTRATIONS

Fig. 1. Photograph of the Risser wedging jacket. Inclusion of all the head is not necessary except in high dorsal curves.

Fig. 2. Patient with a right dorsal idiopathic scoliosis. She is thirteen years of age and the deformity is progressing and decompensating. This is a lateral shift of the trunk to the side of convexity and asymmetry of the pelvis.

Illustration B: X-ray of spine of same patient. Incomplete ossification of the apophysis of the iliac crest is shown on the left.

Fig. 3. A. B. and C. Severe dorsolumbar scoliosis of eighty degrees with very pronounced cosmetic result following correction. First illustration, A, shows uncorrected scoliosis. B shows the maximum amount of correction obtained, which amounts to fifty-three degrees. It is with this type of curve that quite good correction may be expected. This film was taken through her corrective jacket and the chains present in the jacket are used because they form multiple joints which can be utilized if desired and they can be incorporated into the plaster at the time it is first applied. This is an excellent method of hinging. C shows the residual correction after spinal fusion.

Fig. 4. A. B. and C. This is a paralytic scoliosis showing very rapid progress in a ten-year-old girl who had poliomyelitis one year before. The second illustration, B, shows the spine after fusion. Illustration C shows progression of the deformity after fusion. In these cases stabilization is more important than the cosmetic defect, and more often the fusion is too short, or at least it is necessary to elongate the fusion to a lower level, as shown here. Also the effect of vertebral body rotation with growth and fusion is shown.

Fig. 5. A and B. This is a severe paralytic scoliosis in which there is a fixed pelvic obliquity. The fusion of this case was extended into the lumbosacral joint, which was necessary in order to stabilize a very severely paralyzed trunk and lower extremities with severe lordosis. Flexion contractures about the hip markedly influence the curvature of the spine and should be corrected primarily, though it is not always possible to bring about full correction as in this case. Example A shows the severe curvature and pelvic tilt before fusion. Following fusion with marked correction of the lumbar curve there was still a fixed tilt to the pelvis which accounted for the functional increase in the length of the right lower extremity of about three inches, though anatomically the extremities were of equal measurements. Here the center of gravity is shifted entirely to the right, centering over the right leg. B: this is following osteotomy of the right femur. This was done not only to shorten the extremity, but to bring about a shifting of the center of gravity so that the patient could get about in a brace. The patient is now up on braces, getting about very well with the center of gravity shifted to the left and the proximal fragment of the femur acts as an elongated neck of that bone.

Fig. 6. Hemivertebrae asymmetrically placed. However, the spine still shows a tendency to balance and many of these, if they are supported for a long period of time, will compensate themselves satisfactorily.

Fig. 7. Thoracogenic factors resulting in severe scoliosis: This followed an empyema of the chest and thoracoplasty.

Massive Hemorrhage from the Upper Gastro-Intestinal Tract*

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I presume one of the purposes of a discussion such as this is to see how often you can keep the pathologist from being the surgeon. Of course the pathologist is interested not only in the end results as he sees them in his operating room, but also in the fundamental nature of the disease and in the laboratory procedures which may assist in making an early diagnosis and lead to the prompt institution of the proper treatment.

As both Dr. Kullman and Dr. Penberthy have said, we are dealing here today with massive hemorrhage from the upper gastro-intestinal tract and they have correctly said that peptic ulcer first and foremost needs to be considered; second, the consequences of portal hypertension; third, we would probably be inclined to put neoplasms, because all malignant neoplasms and probably 80% of benign neoplasms of the gastro-intestinal tract ulcerate regardless of whether they are epithelial or mesenchymal types.

We might go a little further and say that practically all hemorrhage of the gastro-intestinal tract is due to ulceration. One might say that some of the hemorrhages are due to ruptured blood vessels but in addition to an esophageal varix, for instance, there must be overlying erosion or shallow ulceration which precipitates the hemorrhage. Rarely does the blood vessel burst.

There are many other causes of upper gastro-intestinal hemorrhage but in the majority of instances they do not produce massive hemorrhage; even the ulceration of neoplasms such as gastric cancer, rarely produces massive hemorrhage.

In many of the series of cases which have been reported — and they were clinical studies, chiefly—the cause of upper gastro-intestinal hemorrhage was stated to be obscure or undetermined in from 9% to 25% of the cases; it seems to me the figure should not be higher than 2% or 3%. I presume in some instances the bleeding was mild and in others it was due to gastritis, a diagnosis which is difficult to establish.

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*Read before the Annual Session of the Nebraska State Medical Association in Lincoln, May, 1950, as part of a Symposium on Hemorrhage from Gastrointestinal Tract.

We are dealing with two clinical phenomena, namely: hematemesis and melena. The definition of melena interests me a little because as I have always understood it, to be the discharge from the bowel of altered blood, dark blood, black blood; that is, provided other causes for dark-colored stools could be eliminated. Recently, by usage, dark blood and red blood and occult blood are all considered within the definition of melena, and it is rather confusing.

The blood is altered for very obvious reasons. If the blood is mixed with gastric juice, the hydrochloric acid converts the hemoglobin into acid hematin, very much as is done in our popular hemoglobin tests in the laboratory. In some instances the discoloration is due to formation of ferrous sulphide, methemaglobin and the action of digestive ferments.

Dr. Kullman has said, and I would certainly agree that 50 cc. of blood introduced into the stomach might produce a tarry stool. The amount of bleeding which will produce a tarry stool is quite variable, however, depending very largely on the speed of the passage of blood through the intestinal tract, because if the passage of blood through the gastro-intestinal tract is slow, a fairly large amount of blood may be digested and absorbed.

One interesting feature of this subject is the manner of test which can be employed for the detection of occult blood. We are all familiar with the use of the benzidine test in hospital practice, where the patient is prepared, but we are also interested in what can be done in the doctor's office or at the bedside or in the home, with the patient who is on a regular diet. There it would seem that the guiac test has a very important use because it can be done in the doctor's office, the specimen being secured on the gloved finger in rectal examination being used. This test is not very sensitive; there are very few false positives, but there are a few false negatives. One cannot feel absolutely secure that there is no gastro-intestinal bleeding if the test is negative but the percentage of error is pretty small.

Dr. Penberthy has pointed out certain laboratory tests which might be used: hemoglobin and red cell determination and hematocrit reading. If possible we would also like to know what the blood volume and the specific gravity of the blood is but those tests are rather difficult for ordinary clinical application.

Of course, we are trying desperately by laboratory tests to determine what the deficiency in blood volume and red blood cells is. That is difficult to arrive at because, unfortunately, the laboratory tests which we can apply are not extremely reliable. The information which they give us is not as exact as we'd like to have, especially while the hemorrhage is still occurring. From twelve to twenty-four hours after the cessation of hemorrhage, these laboratory procedures give very reliable information but to get that information early when we would really like to have it is not easy.

The reason we want that information is because we want to restore by one agent or another the deficient cells and deficient volume. Dr. Penberthy has made that point very well. He pointed out that often 500 cc. of blood is routinely given. Somewhere there has crept into our thinking very indelibly that 500 cc. of blood is the right amount to give under all circumstances; there is no particular reason why that should be so. We have to use, many times, clinical judgment to determine what the cell replacement need really is and in determining that or calculating it roughly, as we sometimes have to, we should realize that these patients are bleeding massively. That is what we are talking about—massive hemorrhage. When a patient who normally has ten pints of blood, or thereabouts, bleeds to a red cell count of two and a half million, he doesn't need 500 cc. of blood; he needs 2,500 cc. of blood and it is extremely important, in my opinion, to replace the blood which is lost as completely and as promptly as possible. I think it is also important to realize that the main circulation may be quite adequate whereas the circulation of some of the viscera such as the brain and the liver, may be deficient. It should also be realized that the determination of the blood pressure is a convenient but a rough measurement of circulatory efficiency. Really, it is a sign of decompensation. What we are really interested in is the volume flow of blood per minute. That may be greatly decreased before there is an appreciable drop in blood pressure.

BUY U. S. SAVING BONDS

Current Therapy of the Venereal Diseases*

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Since November, 1943, there have been 4,515 admissions to the Nebraska Intensive Treatment Center at Omaha, 2,265 of which have been for the treatment of syphilis. As a result of contact with a large proportion of the total admissions to the Center, several problems have become apparent and a number of experiences with anti-biotic therapy of the venereal diseases are deemed worth discussing.

There was a time, not long ago, when the inclusion of experience with arsenicals in this work would have been necessary. As of the present however, one thinks only of the use of the antibiotics, especially of penicillin in the consideration of this problem. Since 1943 when penicillin was first introduced in the treatment of syphilis, the use of other agents has gradually shown a decrease, principally because of the safety factor in the administration of penicillin, and because a course of therapy can be completed in a relatively short period of time.

Treatment of early syphilis with penicillin has given as good results as has any other form of therapy that has been studied. The cumulative failure rates, including infectious relapse, reinfection, serologic relapse and sero-resistance for various schedules employing at least 2.4 million units of penicillin, or penicillin combined with other antiluetic drugs are very similar.

In the treatment of infantile congenital syphilis, total doses of 100,000 units of penicillin per kilogram divided into about 60 injections has given satisfactory results in 95% of cases reviewed. Penicillin has proven to be at least as effective as malaria in the treatment of neurosyphilis, and superior to both arsenicals and bismuth. In syphilis associated with pregnancy, penicillin therapy has been much more satisfactory than any previous form of treatment. Congenital syphilis has been prevented in at least 95% of offspring of women treated with 3.4 million or more units of penicillin regardless of whether the women had early or late syphilis.

The results of the treatment of early manifest syphilis and the treatment schedules used have been extensively publicized, and data such as have been referred to in the preceding paragraphs are sufficiently well known and accepted to make it hardly worthwhile to spend time in their discussion. There is however, a vast but poorly appreciated problem in the use of penicillin in the treatment of latent syphilis which deserves whatever attention we may be able to give it.

Our experience in the treatment of early manifest syphilis has been very much in accord with that of others throughout the country. Since November, 1943, more than seven hundred cases of primary and secondary syphilis have been treated at the Center in Omaha. The followup in most of these cases has been good, the results have been excellent, with clinical and serologic cure being the rule. It has not been unusual to see an individual cured without ever developing positive serology. Also, it has not been unusual to see re-infection. In most of the subjects the possibility of re-infection could not be doubted.

The commonest problem in the intensive treatment of early syphilis has been the Herxheimer reaction. This reaction is sometimes so mild as to be associated with only a small transient rise in body temperature during the first twenty-four hours of treatment, and sometimes it is so severe as to be marked by a generallized erythematous rash and a fever of 105° to 106°. On occasions shortly after the Center was moved from Grace Street to the County Hospital I was called by the night nursing supervisors and informed that it appeared that there was measles in the VD unit. The combination of high fever and rash is indeed suggestive. The fever is generally brief, seldom lasting more than twelve hours, and the rash fades in two or three days. A popular explanation for the phenomenon is that the systemic reaction is due to toxins liberated by the dying spirochetes.

The rise in temperature occurs so frequently in penicillin treatment of early syphilis that we have used it as an indication of possible co-existing syphilis in those who were being treated for gonorrhea. In the days when gonorrhea was more frequently treated at the Center than it is now we recorded the patient's body temperature periodically during the first 24 hours. Special effort was made to secure serologic follow-up in all who manifested a rise in temperature.

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*Presented before the Omaha-Douglas County Medical Society, November 14, 1950.

Primary lesions heal quickly under penicillin therapy and the spirochetes disappear from the lesion in a matter of hours.

With latent syphilis we have an entirely different problem in the management than we have in manifest syphilis. Also, information relative to the success of penicillin therapy in latent syphilis is much harder to locate. Of the fourteen hundred cases of latent syphilis which have been treated at the Center, about 800 have been early latent, i.e., less than four years in duration. The remaining have been late latent, or infections which were known to have been in existence for four years or more. At present, most of the syphilis treated at the Center is of the latent variety. Data is not easily available relative to the number of these cases which have received previous treatment, but the proportion of those who have had some treatment in the past is very high. Sometimes this previous treatment is so scanty as to be negligible, but often it has been considerable.

On all latent syphilis treated, a serious effort is made to do a lumbar puncture before the course of penicillin is begun. At least 80% of these subjects have been tapped and the fluid sent to the laboratory for examination. As of the first of September, 1950, there have been two hundred seventeen spinal fluids secured that have laboratory findings indicative of syphilitic activity in the central nervous system. By far the largest number of these subjects were asymptomatic in character. All individuals with positive spinal fluid findings are given the benefit of extended penicillin therapy. At present 10 million units are given over a period of seventeen days.

There has been an opportunity to repeat the lumbar puncture and the examination of the spinal fluid on a significant number of these subjects. The results have been uniformly good with improvement in the spinal fluid picture and in a few instances with improvement in the clinical characteristics. In some subjects with paretic tendencies there has been an exacerbation of symptoms coincident with the administration of the penicillin. A few unfortunates have had to be removed from the open ward because of the flare-up of symptoms.

The incidence of headaches following lumbar puncture at present is less than it was when we put the patient to bed for twenty-four hours following the tap. Now we allow the subject to do as he wishes and to be up on his feet as much as he cares to be following the removal of the fluid. None of the many recommended procedures for terminating the headache have been particularly successful. Passage of time and bed rest seem to be the most useful.

It is with the large group of latent cases that we have our principal problem in management. The members of this large group are the ones who probably have been treated in the past, who are given penicillin, and after a time return for more treatment. These people have a history compatible with having had the infection, and of having had "bad blood" for some time. We all see this type of individual and we are sometimes hard put to satisfy him or his potential employer. I have known subjects in this category who have been denied employment because of the "bad blood," and have known others who have been refused certificates for application for marriage license.

It is because so many of these latent luetics, adequately treated but with persistent positive serology have been seen that we are beginning to appreciate the magnitude of the problem of sero-resistance. M. S. Falk of the Institute for the Study of Venereal Disease and the Department of Dermatology and Syphilology, University of Pennsylvania School of Medicine, has written, "One of the most frequently referred problems in our experience is the patient whose only sign is a persistently positive serologic reaction despite adequate, and even what would be considered many times adequate treatment for syphilis. It is apparently still common belief that a positive serologic test for syphilis —Wasserman, Kahn, Kline, Mazzini, and so forth indicates active syphilis." Our own experience with this problem suggests that the common belief referred to by Falk is not peculiar to the East. A very common letter that we receive at the Center is one from a patient or his physician worded to express the following idea. "I was in for treatment last year and my blood is still 'bad.' The doctor here says I had better come in for more treatment." Or, "John Doe, to whom I have given three courses of penicillin in addition to much arsenic and bismuth still has a positive serologic test for syphilis.

Now what do I do?" These letters we try to answer in accordance with the following observations of results and experience.

A drop in the titre of a quantitative serologic test for syphilis is usually observed after a latent luetic is given adequate therapy, and after the drop the titre usually remains relatively fixed at a comparatively low value. It does not seem to be very often that sero-negativity is approached. The usual old luetic with adequate treatment winds up with a serologic test positive in dilutions of 1 to 4 or 1 to 2, sometimes a bit weaker and sometimes a bit stronger. Serial tests made often show minor fluctuations, but the overall tendency is for persistently and consistently low titre.

The fourteen hundred latent luetics who have gone through our Center have not been followed well enough to enable one to offer statistics to verify a statement, but the general experience has been so consistent that I am enabled to state that I completely agree with Falk in his statement, "There is no point in continuing treatment just because the serologic test remains positive. If the patient has been completely evaluated, that is, has had a thorough physical examination with emphasis on the cardiovascular and nervous systems and a spinal fluid examination, all of which were negative, he should be given an adequate course of treatment and then placed under periodic observation. The persistence of a positive serologic test is not sufficient cause for retreatment. There is little to be gained by continuing to treat and retreat the late syphilitic patient on the basis of sero-resistance alone."

It is well to remember that at least four months must elapse before one is able to measure the change in the serologic titre which may occur as a result of intensive treatment. Some time after the lapse of this interval the titre or dilution at which the serologic test reacts will tend to level off and become relatively constant. Should relapse or reinfection occur the titre will show definite and significant increase which is persistent. An individual who has had a low quantitative titre for a period of time and who shows a significant and persistent increase is a candidate for retreatment. The results we see are leading us to believe that sero-resistance is the rule rather than the exception in subjects who have had untreated syphilis for three or more years.

Here is one explanation which has been offered to account for sero-resistance. Although the mechanism of the positive serologic test for syphilis is not yet completely explained, it is generally believed that positivity indicates the presence of an antibody called reagin in the subject's serum. This antibody is produced by the individual's immunologic mechanism in response to infection with the Treponema pallidum and may be compared in many respects to antibodies which are formed in other infectious processes. The analogy to the positive Widal test in typhoid fever or after inoculation with typhoid vaccine is often used as an illustration.

In the patient with early syphilis, the infection has not had sufficient time to make a profound or indelible impression on his immunologic mechanism and so, with prompt adequate treatment and consequent destruction of the spirochetes, sero-negativity can be achieved. In late syphilis however, the infection has apparently made a more lasting, if not permanent impression on the cells which produce the antibody reagin, and they are so altered physiologically that they continue to produce the reagin in small amounts despite the fact that the patient has received sufficient treatment to render him clinically cured.

Whether or not this is the entire explanation, clinical studies of large numbers of patients observed for long periods of time have proved fairly conclusively that there is no foundation to the belief that a positive serologic test for syphilis is indicative of active infection in late syphilis.

Placental transfer of the reagin accounts for the positive serology frequently found in infants less than three months of age who have mothers with adequately treated syphilis or untreated syphilis and positive serology. In the cases we have had at the Center it has been helpful to secure quantitative serologic tests on bloods taken from mother and child on the same day. When the child has syphilis the titre has invariably been much higher for the child than it has been for the mother. More often than not, the serologic test has been positive in the infant's blood only because of the transfer of reagin through the placenta. In such, the titre of the infant's blood is comparable to or less than that of the mother's. There is of course no evidence of congenital lues on physical examination. It is generally believed that a child eliminates all of the maternal reagin during the first three months of its life. This fact is significant because it is really only after the passage of this amount of time that the child is speaking for itself, serologically. From time to time we receive a note with reference to the results of a "cord wasserman." Obviously, such results are not particularly significant with respect to the child's serology because of placental transfer of the reagin.

Routine treatment schedules at present involve the administration of 600,000 units of penicillin, either as penicillin G or as procaine penicillin daily for ten days for early and late syphilis. If there is evidence of central nervous sytem involvement the course is extended to a total of 10 million units. When there is evidence of cardiovascular involvement it has been customary to reduce the first day's dosage of penicillin to 100,000 units and then to carry on at full dosage for ten days.

Chancroid which is often seen is treated satisfactorily by the sulfonamides, five grams of mixed sulfonamides being administered each day to an average size adult for seven days. When needed, potassium permanganate solution 1:5000 is used as a soak four times a day.

The occasional case of granuloma inguinale which may be seen can be treated with streptomycin, 20 grams being used over a period of five days. Aureomycin has also been reported to be effective in doses of two grams a day for about ten days.

Gonorrhea in both male and female has been most successfully handled by using 600,000 units of penicillin a day for two successive days. The gonococcus is also susceptible to streptomycin, aureomycin and chloromycetin. Often there is a slight mucus discharge which persists for one to three weeks after treatment of gonorrhea with an antibiotic. This discharge is not indicative of persistent infection, and it disappears spontaneously. The patient treated for gonorrhea should have serologic followup for at least three months because of the possibility of suppression of syphilitic infection which might have been acquired at the same time as the gonorrhea.

This report cannot be brought to a close without a word about experience with penicillin reactions. We are happy indeed that as of this date there has been no reaction manifested which could not be controlled by the antihistaminics used both orally and locally. It has been necessary at times to use relatively large doses, often as much as 100 milligrams of the antihistaminic every two hours to control the symptoms. This dose is of a drug which is ordinarily used in 50 milligram doses. We go on in the hope that we will continue to be favored with reactions which can be controlled by this simple means.

The Middle Lobe Syndrome

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The middle lobe syndrome was first described as such by Graham, Burford and Mayer in 1948. Twelve cases were reported⁽¹⁾. Paulson and Shaw subsequently reported their experience with thirty-two patients seen over a three year period with chronic atelectasis and pneumonitis of the right middle lobe⁽²⁾.

Since this syndrome undoubtedly has gone unrecognized in the past, we believe that further emphasis, with the report of an illustrative case, is warranted.

SYMPTOMATOLOGY

Cough, pain and hemoptysis are the cardial symptoms. Dyspnea and wheeze are less common. In Paulson and Shaw's series, the majority gave a history of recurrent pneumonia, in many two or three times. The duration of symptoms varies from several months to twenty years.

PATHOLOGY AND PATHOGENESIS

The pathological picture manifests changes secondary to obstruction of the middle lobe bronchus; atelectasis and parenchymal infection. The obstruction of the bronchus may be intrinsic by inflammation or edema but is usually extrinsic by pressure of two or more enlarged lymph nodes closely applied to the bronchus. These may completely embrace this structure. In approximately twenty-five per cent of the cases, these nodes will show calcifications and may partially erode the bronchial wall. Complete erosion results in the appearance of a broncholith.

Although atelectasis and pneumonitis occur in any lobe, certain factors peculiar to the right middle lobe are at play. The right middle lobe bronchus is of small caliber and emerges from the intermediary bronchus at right angles, factors favoring poor drainage. Because of its small caliber, the middle lobe bronchus may be occluded by intrinsic inflammation. The middle bronchus lies at the apex of the lymphatic pathways from both the upper and lower lobes, and as previously mentioned, the nodes of this drainage area almost completely surround the middle lobe bronchus.

Thus a vicious cycle may be introduced by infection of the right lung producing lymph node enlargement which in turn favors further infection by blocking drainage.

DIAGNOSIS

Diagnosis is not difficult if with the given symptom complex this condition is borne in mind. The usual posteroanterior chest film may or may not disclose right middle lobe atelectasis. If suspected, a lateral film should always be taken. Resultant findings are not to be confused with interlobar effusions.

A complete bronchogram should be done inasmuch as bronchiectasis of other lobes must be ruled out. A failure of filling of the right middle lobe bronchus is significant and is not to be interpreted as a fault in technique. A repeat bronchogram then should be done if technique is questionable. If bronchial filling of the middle lobe occurs, atelectasis may be substantiated by an approximation and compression of the RML branches.

TREATMENT

The treatment of the middle lobe syndrome is by surgical removal of the lobe. If untreated, advanced parenchymal suppuration and emphysema will probably occur.

ILLUSTRATIVE CASE

J.H., male, age 25, was first seen April 24, 1950 in consultation. The patient suffered from asthma all of his life, using an adrenalin spray four months of the year. He breathed with an audible wheeze. He was rejected from military service because of asthma, and in 1942 was in bed for a month with the diagnosis of pneumonia. Cough was not remarkable, but sputum was raised daily. There was no hemoptysis. About three weeks prior to the first examination, the patient had a period of malaise and fever which subsided after an episode of profuse sputum production described as capable of filling two quart jars. This occurrence followed a three week period of no sputum.

Physical examination was not remarkable except for asthmatic wheezes in the chest. A chest film showed atelectasis of the right middle lobe; bronchograms showed a failure of filling of the middle lobe bronchus.

Right middle lobectomy was performed May 8, 1950. In this condition, completion of incomplete fissures is aided by the demarcation of the atelectatic lobe. Almost complete atelectasis of the right middle lobe was found. Two soft enlarged nodes were closely applied to the superolateral and inferomedial aspects of the bronchus.

Convalescence was uneventful. The patient was up on the fourth day and home on the tenth postoperative day.

Six weeks later, the patient reported complete freedom from asthma since his operation, the longest symptom free period he could recall.*

The pathologic report† described considerable focal atelectasis scattered around areas of organizing pneumonia. In some atelectatic lobules the alveolar walls were markedly thickened and fibrous. Occasional lobules were filled with recent hemorrhage while others were essentially normal.

A section through a large bronchus showed fibrosis of the muscularis with considerable infiltration of the wall by lymphocytes. The epithelial cells lining the bronchi were filled with mucus and there was moderate to marked thickening of the basement membrane. The smaller bronchi showed thickening of their walls with considerable peribronchiolar fibrosis and lymphocytic infiltration.

Diagnosis: Atelectasis, pneumonitis, middle lobe, right lung. Bronchiectasis, middle lobe, right lung.

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*Eight months later the patient has had no recurrence of his asthma.

†Dr. Miles Foster, Pathologist, Bishop Clarkson Memorial Hospital, Omaha, Nebraska.

EWING CONTINUES ARGUMENT FOR NATIONAL COMPULSORY HEALTH INSURANCE

Although Congress and most of official Washington is concentrating on emergency legislation and planning, FSA Administrator Oscar Ewing continues his campaign for a national compulsory health insurance program. The first section of Federal Security Agency's annual report for fiscal 1950, a 16-page document, contains arguments in favor of the President's health program, of which Mr. Ewing is the principal advocate. In his report Mr. Ewing states in part: "The Federal Security Administrator repeatedly reexamined this issue (health insurance) in the light of facts and opinions. The conviction stands that national health insurance is the best way yet devised to prepay the cost of medical care and make adequate medical services widely available. The conviction stands, too, that health insurance would surmount the financial barrier to medical care without jeopardizing the traditional responsibilities of anyone —the doctors, the people or their government officials."

—From A.M.A. Washington Office.

Infectious Diarrheas: Part II

Some Bacteriological and Epidemiological Aspects

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SHIGELLOSIS

Intestinal infections with shigella organisms are probably the most common type of infectious diarrhea, due to a specific group of pathogens, reported in the United States at the present time. Statistical data cited by Smith, Martin, et al (1948) for the year 1944, show some 38,000 reported cases of shigellosis as contrasted with only 6,000 cases of typhoid fever, and 3,500 cases of amebic dysentery. Contrary to popular belief, shigella infections do not always produce the severe clinical entity known as bacillary dysentery. As the true etiology of many of the milder cases is not recognized and as many of the more severe cases undoubtedly go unreported, the statistical data probably represent a fraction of the number of cases actually occurring.

Hardy and Watt (1945) have demonstrated the signs and symptoms of shigellosis in man to be extremely variable in severity. This variability of symptomatology has been established even for epidemics known to be caused by a single Shigella species. Mild cases may show only slight abdominal discomfort in association with a few loose stools. Severe cases often show nausea, vomiting, severe prostration, and a diarrhea which begins as a thin watery discharge, quickly looses its fecal character, and is ultimately composed of blood, pus, and mucus. In the later stages of the severe form, the patient suffers agonizing abdominal cramps and constant tenesmus.

The severe symptomatology of most shigella infections is due to the fact that all pathogenic Shigelleae possess potent endotoxins and in the case of Shigella dysenteriae (Shiga) and some strains of Shigella ambigua potent exotoxins as well. Characteristically these organisms remain confined to the intestine; hence, bacteremia, septicemia, or metastatic complications seldom, if ever, occur.

Felsen (1945) and Boyd (1946) have shown that chronic dysentery may develop in some patients and persist for years.

The more severe forms of shigellosis, commonly known as bacillary dysentery, carry a significant mortality rate, particularly in young children.

The epidemiology of shigellosis is unusual, making control measures difficult, because of the fact that, with rare exceptions, organisms of this group are confined to man. Transmission of the infection is usually ascribed to active cases of the disease or to healthy or convalescent carriers. To emphasize the mode of transmission, Watt and Hardy (1945) found 9.1 asymptomatic carriers for each current case of dysentery. This relatively direct method of spread of the organisms makes control measures such as pasteurization of milk, chlorination of water, and fly control relatively ineffective.

Bacteriological diagnosis of shigellosis depends primarily upon the isolation and identification of the organism from the stool or from swabs applied directly to ulcers in the intestinal mucosa. The organisms are encountered in moderate numbers in the stool, but are abundant in the ulcerations seen on proctoscopic examination. The organism rarely, if ever, invades the blood stream; hence, blood cultures are worthless for diagnosis. More important to etiological diagnosis is the fact that living shigella organisms rapidly disappear from specimens which are allowed to stand, especially if the reaction of the specimen is acid. Accordingly then, suitable differential media or enrichment media designed for the isolation of these pathogens should be promptly inoculated, if specific diagnosis is to be made. The actual techniques used in isolation and identification of this group of organisms are available in any good text on medical bacteriology and need not be discussed here.

Diagnosis of shigellosis by agglutination techniques with patient's serum is difficult as Thomas and Levine (1946) have shown that normal sera may show titers as high as 1:320 or 1:640. Despite this fact, demonstration of a rising titer or an extremely high titer is of diagnostic significance.

SALMONELLOSIS

At the present time well over 150 different species of Salmonelleae have been isolated and classified by antigenic analysis in the United States alone. Of this number some 60 different species have already been isolated from patients in the United States. With continued study of sporadic cases and epidemic outbreaks of infection, it is expected that most, if not all, of the remaining 90 species will be isolated from cases of human disease.

The Salmonelleae are a large, heterogeneous, group of organisms—some of which, such as S. typhosa, S. partyphi A, S. paratyphi B, and S. paratyphi C are primarily pathogens for man, but these organisms can also produce infections in animals. Other members of the group are primarily pathogens for animals, but are capable of producing human disease of varying severity. In a recent survey of 2,000 cases of human salmonellosis, exclusive of typhoid fever, by Seligmann, Saphra, and Wassermann (1946), the overall mortality rate was 5.1%. However, a death rate of 26% occurred in patients with S. cholerae-suis infection. This organism is a normal pathogen for swine. Still other members of the group are almost invariably pathogens for animals and seldom, if ever, cause disease in man; however, current thinking places these species as potential pathogens for man.

The problem is further complicated by virtue of the wide diversity of clinical syndromes which may follow infection by Salmonella species, and by the wide difference of animal reservoirs of these species, and by the difficulty of sanitary control of these reservoirs.

The principal clinical types of infection in man may be divided into four major groups. First, the most common clinical type is the socalled "food poisoning" syndrome. According to Smith, Martin, et al (1948), except for S. typhosa, all of the Salmonelleae can cause food poisoning; however, infections with S. typhimurium, S. paratyphi B, S. cholerae-suis, and S. enteritidis are the most common. Sufficient endotoxin to produce symptoms is produced in 6-12 hours, by the rapid growth of the organisms in the intestinal tract. Symptoms, themselves, may be mild or severe with nausea, vomiting, abdominal cramps, and diarrhea. Complete recovery in 2 to 4 days is the rule, except in very young infants and the aged where dehydration and acidosis may supervene and produce a significant mortality.

The second most common type of salmonellosis is gastroenteritis. Again this syndrome may be produced by a wide variety of Salmonella species. The infection normally develops more slowly and persists for a longer period of time than in "food poisoning." These patients usually have fever, nausea and vomiting, very superficial ulcerations of the gastrointestinal tract with mucus and pus in the diarrheic stools, and other symptoms simulating those of dysentery.

The third and most severe type of salmonellosis is the typhoidal and septicemic forms. In these types the patient normally suffers a febrile illness, with or without gastrointestinal symptoms, which may persist for weeks. The mortality rate may be as high as 25%. The typhoidal type is most often produced by S. partyphi A, S. paratyphi B, S. paratyphi C, S. sendai, and S. typhimurium. The septicemic form is most often produced by S. cholerae-suis. In this septicemic type, focal lesions may develop, resulting in osteomyelitis, endocarditis, pneumonia, pulmonary abscess, and purulent meningitis. Hurtado and Aballi (1947) have reported a severe outbreak with high mortality among newborn infants with S. habana in which many of the cases were complicated by a purulent meningitis produced by the same organism. Hormaeche and co-workers (1943) in Montevideo, Uruguay have shown that salmonella organisms are common etiological agents producing outbreaks of diarrhea in young infants. These same workers have also demonstrated that salmonella infections are more common in infants under one year of age than are shigella infections (the socalled Montevideo doctrine). This finding has been confirmed by Hurtado and Aballi (1947).

Although salmonella infection is not the only cause of infantile diarrhea, this constitutes the fourth major type of salmonellosis.

To further illustrate the wide diversity of potential sources of salmonella infections for man, we have made a compilation of species from Topley and Wilson (1946) and from Edwards and Bruner (1943). These represent world-wide statistics. A total of 140 Salmonella species are listed. Of these 105 have been isolated from man, 36 from swine, 43 from fowl, 8 from rodents, 31 from dried egg powder, and 33 from other animals, such as cattle, sheep, horses, foxes, cats, dogs, camels, reptiles, etc.

Bacteriological diagnosis is best made by isolation and identification of the specific organism. In general these organisms are not as fastidious as those of the shigella group. In acute cases of the disease, the organism can sometimes be isolated for practical purposes in pure culture from the stool on primary inoculation. Blood culture and cultures from other specific metastatic sites may be positive as this infection is frequently septicemic in form.

Diagnostic use of agglutination techniques with patient's serum is somewhat more valid than in the case of shigella infections because higher titers are frequently obtained. Care must be taken, however, to rule out the possibility of a nonspecific anemnestic reaction in a previously vaccinated individual.

OTHER BACTERIAL INFECTIONS

The true pathogenic significance of various Proteus sp., paracolons, Pseudomonas sp., hemolytic Escherichia coli, certain strains of Eberthella, streptococci, etc., as etiological agents of infectious diarrhea is still debatable as many of the organisms are reported in normal stools. There are, however, numerous papers in the literature which cast considerable suspicion on some of the organisms in question. For instance, a member of this group may be consistently isolated from patients during an epidemic and may on occasion show a high agglutinin titer with patient's serum. Such a finding is fairly good evidence of pathogenicity; however, it is exceedingly difficult to experimentally prove the validity of these organisms as etiological agents in infectious diarrhea.

Some believe that almost any organism may produce diarrhea—if it is introduced by food in sufficient numbers to an intestine in which it is not normally present. The high incidence of septicemia in newborns and marantic infants with these varied organisms suggests a possible increased susceptibility over that observed in adults.

ORAL USE OF CORTISONE EFFECTIVE IN RHEUMATOID ARTHRITIS

Two Los Angeles physicians report that cortisone given by mouth is just as effective as intramuscular injections of the drug in the treatment of rheumatoid arthritis and, in addition, has distinct advantages.

Writing in the January 6 Journal of the American Medical Association, Drs. Edward W. Boland and Nathan E. Headley, specialists in internal medicine, describe their observations of 23 patients who were given oral preparations of cortisone. For control purposes, 14 were selected because they had previously received intramuscular injections of the drug.

In 22 of the 23 patients, they found oral preparations were "highly effective" in suppressing the activity of the disease or maintaining control of the rheumatic manifestations, or both. They added:

"The pattern of improvement with initial large suppressive doses of cortisone given by mouth was similar to that observed in patients who have received equivalent amounts of the hormone by intramuscular injection."

It was suggested, however, that doses of one-fifth to one-third more may be necessary if the drug is given orally.

They found, in general, that while beneficial effects were produced more rapidly with oral use of the drug, these benefits also disappeared more quickly. These observations were farther supported by the fact that results were "definitely best" when the drug was taken in divided doses throughout the day instead of in one large dose.

Effects of the drug were noted in from 5 to 48 hours when given orally. This is in contrast to the 48 to 72 hours usually required with intramuscular injections.

The oral use of cortisone in treatment of chronic diseases such as rheumatoid arthritis has distinct advantages, the doctors pointed out. The main arguments for oral use are: discomfort from repeated intramuscular injections is eliminated, the patient is made independent of others for his medicine, the stimulation of mental activity and appetite is less pronounced and it is less expensive.

The most serious objection to the use of cortisone for chronic rheumatoid arthritis, they said, "is the high incidence of hormonal side effects when administration is continued and it must be continued for effects are temporary and not curative), especially in large doses, for extended periods."

Adverse reactions were found to be substantially reduced by using smaller doses for prolonged control or by the employment of interrupted schedules of treatment rather than large continuous doses.

For doctors and laymen alike, Drs. Boland and Headley cautioned:

"Many more facts must be ascertained before this powerful hormone with its many physiological actions can be considered as a safe therapeutic agent for general distribution and use."

HOUSE DUST

Before the American College of Allergists at the Edgewater Beach Hotel, Dr. Albert N. Unger of Chicago summarized the literature on house dust in relation to human health and correlated with it his own experience in the management of allergic patients.

"House dust," says Dr. Unger, "is of major importance as a cause of disease. It acts as an irritant to the lining of the nose, throat, and lungs, thereby preparing the way for many diseases. It is one of the most frequent trouble-makers in the field of allergy. In fact, it ranks with the pollen of the ragweed as the cause of hay fever and bronchial asthma. Finally, house dust acts as both a carrier and a reservoir for bacteria and fungi, thus spreading infections and producing further allergies.

"In the presence of infections and in the families of allergic patients, too much effort cannot be expended in freeing the home of house dust." Dr. Unger concluded.

The Nebraska State Medical Journal

Sharp Building, Lincoln, Nebraska
Federal Securities Building, Lincoln, Nebraska

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Subscription $2.50 Per Year. Single Copies 35c Each

The Publication Board does not assume responsibility for opinions expressed in original articles published in this Journal.

Manuscripts should be typewritten, double-spaced, and the original, not the carbon, submitted.

Reprints should be ordered from the printer, The Huse Publishing Co., Norfolk, Nebraska.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

Vol. 36 April No. 4

THE A.M.A. TWELVE POINT PROGRAM

1. Creation of a Federal Department of Health of Cabinet status with a Secretary who is a Doctor of Medicine.
2. Promotion of medical research through a National Science Foundation with grants to private institutions which have facilities and personnel sufficient to carry on qualified research.
3. Further development and wider coverage by voluntary hospital and medical care plans to meet the costs of illness, with extension as rapidly as possible into rural areas.
4. Establishment in each state of a medical care authority to receive and administer funds with proper representation of medical and consumer interest.
5. Encouragement of prompt development of diagnostic facilities, health centers and hospital services, locally originated, for rural and other areas.
6. Establishment of local public health units and services.
7. The development of a program of mental hygiene with aid to mental hygiene clinics in suitable areas.
8. Health education programs administered through suitable state and local health and medical agencies to inform the people of the available facilities and of their own responsibilities in health care.
9. Provision of facilities for care and rehabilitation of the aged and those with chronic disease and various other groups not covered by existing proposals.
10. Integration of veterans' medical care and hospital facilities with other medical care and hospital programs and with the maintenance of high standards of medical care.
11. Greater emphasis on the program of industrial medicine.
12. Adequate support with funds free from political control, domination and regulation of the medical, dental and nursing schools and other institutions necessary for the training of specialized personnel required in the provision and distribution of medical care.

Organization Section

MEDICAL-PRESS-RADIO CONFERENCE

The annual conference of presidents and secretaries will be combined this year with the second Medical-Press-Radio Conference. The joint meeting will be held in Lincoln, April 6, at the Cornhusker hotel.

Your Public Relations Committee has put tremendous effort into the improvement of relations with the press and radio groups. The first stride in this direction was taken two years ago when the first meeting with press and radio representatives was held in Omaha. As a result of that meeting, a Code of Cooperations was established. This Code now directs the mutual cooperation of all three professions.

The Presidents and Secretaries Conference has been an annual event for several years. Its primary purpose is to acquaint county society officers with the functions that organized medicine is continually carrying on. This meeting is aimed at keeping the entire membership better informed regarding these functions.

Now that the two have been combined, it will permit all presidents and secretaries the opportunity to participate in the maintenance of good press-radio relationships. And at the same time, publishers and station managers will be given a first hand view of medical organization. In addition, members of the legislature have been invited to attend the noon luncheon.

A physician has been asked to personally invite each publisher, station manager, and legislator to attend as his guest. This is a courtesy that must not be overlooked. The entire success of the meeting depends upon this being done. If you are one of those who has been asked to extend this invitation, please make certain that it has been done.

TWO DIFFERENT VIEWS

Not long ago a Chicago labor publication carried a story under this headline: "Shut Two Hospitals; Lack of Doctors." "Two new hospitals have been completed in West Virginia by the Veterans Administration at a cost of 12 million dollars. They are all furnished and staffs have been organized so far as possible, but neither hospital has been able to admit a single war veteran patient.

"The difficulty is that the V.A. has been able to recruit only one doctor, of the many who would be needed in these hospitals to care for patients. Yet the 'Organized Doctors' bitterly oppose a bill which would have Uncle Sam give financial assistance to medical schools so they could train more physicians."

Then the New York Times editorial page discussed the same subject. Pointing to the insistance of General Pauley and Dr. Magnuson that good medical care for veterans could be maintained only if new hospitals were built in or near medical centers, The Times editorial continued:

"The policy of locating hospitals near medical centers was adhered to strictly in the immediate post-war period, but eventually political rather than medical motives once more began to dictate their location. As a result, there are now two new veterans hospitals in West Virginia, built at a cost of $12,000,000 which cannot open their doors because of inability to recruit physicians.

"The blame, however, cannot be placed on Dr. Hawley, Dr. Magnuson and the V.A. medical service. They forecast the inevitable consequences of building hospitals away from medical centers. The present situation results from their professional advice going unheeded and hospitals' locations being determined by other than medical consideration."

If you were a layman, wouldn't you be confused, too?

THE CHANT CONTINUES

For the past nine months Congress and most (not all) Washington officials have been concentrating on national emergency legislation. But not FSA Administrator Oscar Ewing. He has continued his campaign for socialized medicine.

The first section of his report for 1950 again pushes for compulsory health insurance. He states in part: "The Federal Security Administrator repeatedly reexamined this issue (health insurance) in the light of facts and opinions. The conviction stands that national health insurance is the best way yet devised to prepay the cost of medical care and make adequate medical services widely available. The conviction stands, too, that health insurance would surmount the financial barrier to medical care without jeopardizing the traditional responsibilities of anyone—the doctors, the people or their government."

In connection with Mr. Ewing, another interesting item popped up recently. Former Congressman Andrew Biemiller, Milwaukee, who was defeated for reelection last November, has been announced as a new $50-a-day consultant to the Federal Security Agency. Biemiller was one of the co-authors of socialized medicine. It's hard to believe, but he is to be a consultant on "Health Matters."

Who is Andrew J. Biemiller? In 1937, he introduced a compulsory health insurance bill in the Wisconsin legislature. But just shortly before becoming a state senator he had been the Socialist education director for Milwaukee county. And just prior to that he had managed the presidential campaign for Norman Thomas in the Middle Atlantic States.

It would be a tragic mistake to be lulled into the belief that the issue of socialized medicine is dead.

PROGRAM
EIGHTY-THIRD ANNUAL SESSION NEBRASKA STATE MEDICAL ASSOCIATION

April 30, May 1, 2, 3, 1951

Hotel Paxton, Omaha, Nebraska

MONDAY, APRIL 30, 1951

GOLF TOURNAMENT

1:00 p.m.______________________Omaha Field Club

TRAP SHOOT

1:00 p.m._____________________Omaha Country Club
SPORTSMAN DINNER_________Omaha Field Club
Cocktails 6:00 p.m. Dinner 7:00 p.m.

Reservations should be made with committee chairman, L. W. Lee, M.D., 1436 Medical Arts Building, Omaha 2, Nebraska.

TUESDAY, MAY 1, 1951

TUESDAY MORNING

9:00 Meeting to be opened by Chas. H. Sheets, M.D., Cozad, President, Nebraska State Medical Association.

John L. McFee, M.D., Ogallala, Presiding

9:05 "Carcinoma of the Bladder; Its Diagnosis and Care"
—Henry Kammandel, M.D., Omaha

9:25 "The Use of Novocaine and Ryaluronidase Injections in Acute Muscular and Ligamentous Strains"
—Samuel A. Swenson, Jr., M.D., Omaha

9:45 "The Value of Spinal Fluid Pressure Measurement in Head Injuries"
—Wilbur A. Muehlig, M.D., Omaha

10:05 "Drug Costs in the Assistance Program"
—R. E. Garlinghouse, M.D., Chairman M.C.H. Commmittee

10:25 Discussion

10:35 "The Use and Abuse of Bronchography in Lung Disease"
—Mirle A. Kellett, M.D., Associate in Radiology, New England Deaconess Hospital, Boston

11:05 "Management of Cough, Wheezing or Hemoptysis in Certain Patients"
—Richard H. Overholt, M.D., Thoracic Surgeon, New England Deaconess Hospital, Boston

11:35 "Lung Tumors As the Pathologist Sees Them"
—William A. Meissner, M.D., Pathologist, New England Deaconess Hospital; Associate in Pathology, Harvard Medical School, Boston

12:30 Alumni Luncheon

TUESDAY AFTERNOON

Joseph D. McCarthy, M.D., Omaha, Presiding

2:00 Presidential Address
—Chas. H. Sheets, M.D., Cozad
2:20 Installation of Incoming President
—Donald B. Steenburg, M.D., Aurora
2:30 Guest Introduction
—Arlo Dunn, D.D.S., Omaha, President, Nebraska State Dental Association
2:40 Necrology
—George Salter, M.D., Norfolk
2:50 NEW ENGLAND DEACONESS — Panel Discussion, "The Management of Silent Intrathoracic Lesions"

Harvey L. Clarke, M.D., North Platte, Moderator

—Mirle A. Kellett, M.D.
—Richard H. Overholt, M.D.
—William A. Meissner, M.D.
QUESTIONS—From the Floor

TUESDAY EVENING

7:00 FUN NITE, Omaha Field Club, Douglas County Medical Society, sponsors

WEDNESDAY, MAY 2, 1951

WEDNESDAY MORNING

Robert J. Morgan, M.D., Alliance, Presiding

9:00 "The Preoperative Evaluation of the Toxic Goitre Patient"
—Wm. P. Kleitsch, M.D., Omaha
9:20 "Errors Frequently Made in Fracture Treatment"
—Werner P. Jensen, M.D., Omaha
9:40 "Prevention and Treatment of Eclampsia"
—Lester D. Odell, M.D., Omaha
10:00 Discussion
10:10 "Breast Disorders Complicating Pregnancy"
—Robert L. Schmitz, M.D., Clinical Associate, Department of Surgery, Stritch School of Medicine, Loyola University, Chicago
10:40 "Anemias of Pregnancy"
—Henry L. Schmitz, M.D., Associate Clinical Professor, Department of Medicine, Stritch School of Medicine, Loyola University, Chicago
11:10 "Indications for Cesarean Section"
—Janet E. Towne, M.D., Assistant Clinical Professor, Department of Obstetrics and Gynecology, Stritch School of Medicine, Loyola University, Chicago
11:40 "Vaginal Delivery Following Cesarean Section"
—Herbert E. Schmitz, M.D., Professor and Chairman, Department Obstetrics and Gynecology, Stritch School of Medicine, Loyola University, Chicago

WEDNESDAY AFTERNOON

12:30 Luncheon, Ballroom

Donald Steenburg, M.D., Aurora, Presiding

1:30 Address
—R. G. Gustavson, Chancellor, University of Nebraska, Lincoln
2:00
2:30 STRITCH SCHOOL OF MEDICINE, LOYOLA UNIVERSITY—Panel Discussion, "Pelvic Surgery"

Wm. C. Kenner, M.D., Nebraska City, Moderator

—Herbert E. Schmitz, M.D.
—Robert L. Schmitz, M.D.
—Henry L. Schmitz, M.D.
—Janet E. Towne, M.D.
QUESTIONS—From the Floor

WEDNESDAY EVENING

7:00 Banquet, Nebraska State Medical Association, Hotel Paxton
"The Problems Confronting Medicine in the Immediate Future"
—John W. Cline, M.D., San Francisco, President-Elect, American Medical Association

THURSDAY, MAY 3, 1951

THURSDAY MORNING

Walter C. Harvey, Sr., M.D., Gering, Presiding

9:00 "Diverticulitis May Mask Carcinoma of the the Colon"
—John H. Brush, M.D., Omaha
9:20 "Subdural Hematoma in the Absence of Objective Neurologic Findings"
—Louis J. Gogela, M.D., Lincoln
9:40 "Rheumatoid Arthritis—ACTH, Cortisone, and New Concepts of Management"
—Harold N. Neu, M.D., Omaha
10:00 "Can Anything Be Done to Prevent Arteriosclerosis?"
—F. W. Niehaus, M.D., Omaha
10:20 Discussion
10:30 "Care of the Patient with Chronic Liver Disease"
—Wade Volwiler, M.D., Associate Professor of Medicine, University of Washington, Seattle
11:00 "Diagnosis and Treatment of Malignant Diseases of Blood"
—Quin B. De Marsh, M.D., Assistant Professor of Anatomy, University of Washington, Seattle
11:30 "Roentgenological Problems in the Early Diagnosis of Carcinoma of the Colon"
—E. A. Addington, M.D., Assistant Clinical Professor of Radiology, University of Washington, Seattle

THURSDAY AFTERNOON

12:30 Luncheon, Ballroom
1:30 Joint Meeting with Woman's Auxiliary

Joseph D. McCarthy, M.D., Omaha, Presiding

Presentation of Woman's Auxiliary Past President Pin to Mrs. Glenn Whitcomb
Reading of Prize Essay and Award
Introduction Mrs. Theodore Heinz, Chairman, Public Relations Committee, Woman's Auxiliary to the American Medical Association
"Our American Heritage"
—Donald J. Cowling, A.B., M.A., B.D., Ph.D., L.L.D. (Hon.) President Emeritus, Carleton College, Northfield, Minnesota
2:30 UNIVERSITY OF WASHINGTON MEDICAL COLLEGE—Panel Discussion, "Diagnosis and Management of Hidden Gastrointestinal Bleeding"

Dan A. Nye, M.D., Kearney, Moderator

—Wade Volwiler, M.D.
—Quin B. De Marsh, M.D.
—E. A. Addington, M.D.
QUESTIONS—From the Floor

The Woman's Auxiliary

PROGRAM OF 26TH ANNUAL MEETING

Headquarters: Hotel Paxton, Omaha

April 30, May 1, 2, 3

MONDAY, APRIL 30, 1951

Registration Headquarters — (All members should register early)

10:00 a.m. Executive Session, Hotel Paxton —Mrs. Glenn D. Whitcomb, Presiding
12:30 p.m. Informal Luncheon, Hotel Paxton
2:00 p.m. Tour of Joslyn Memorial Art Museum, 22nd and Dodge, followed by Tea at 3:00 p.m.
7:00 p.m. Fun Night, Omaha Field Club, 36th and Woolworth, Dinner, Program, Dancing, Door Prizes

WEDNESDAY, MAY 2, 1951

9:30 p.m. Annual Business Meeting, Hotel Paxton —Mrs. Glenn D. Whitcomb, Presiding
12:30 p.m. Luncheon and Style Show, Blackstone Hotel, 36th and Farnam. Style Show by the Aquila. Tickets $2.25 each. Available at Registration Desk. Early reservations appreciated.
Mrs. Theodore E. Heinz, Guest Speaker. (Chairman, Public Relations Committee, Woman's Auxiliary to the American Medical Association).
7:00 p.m. Banquet, Hotel Paxton, John W. Cline, M.D., President-Elect A.M.A.

THURSDAY, MAY 3, 1951

9:00 a.m. Post Executive Workshop, Hotel Paxton. Breakfast, private dining room. Mrs. B. R. Bancroft, Presiding.
12:30 p.m. Joint Meeting. Luncheon, Hotel Paxton. Reading of the Winning Essay.

MRS. THEODORE E. HEINZ,
Public Relations Chairman.

AUXILIARY NEWS

Members of the Scotts Bluff County Medical Auxiliary met with their husbands for dinner at the Country Club February 13, then separated for their respective meetings. There were 15 auxiliary members and 3 guests present.

Mrs. Cope, the school nurse, spoke to the ladies outlining their department's general work, their facilities and the aid received from various groups.

She gave us some specific cases and told in what manner the emergencies were met, and went into some detail explaining the organization and the aid given her by our clothing center.

President, Mrs. John Heinke, then called a business meeting. The main topic for discussion was the Benefit Dessert planned for early April.

MRS. L. J. GRIDLEY,
Publicity Chairman.

Members of the Lancaster County Medical Auxiliary met for 1 o'clock luncheon at the home of Mrs. E. B. Reed, 4621 A street, March 5. Miss Mary Jane Young, social worker of the Lincoln-Lancaster Child Guidance Center, outlined the work of the Center and discussed problems of children that arise in the work of the Center and discussed problems of children that arise in the home, school and society.

MRS. C. K. ELLIOTT,
Publicity Chairman

Twelve members of the Adams County Medical Society Auxiliary were present for the March meeting Wednesday evening at the Hastings State Hospital. Dinner was served to the doctors and their wives at tables decorated in the St. Patrick's motif.

At a business meeting, Mrs. Carl Gouldman, auxiliary president, announced that gift subscriptions to 'Today's Health" were being sent to the reading rooms of the YMCA and YWCA here. Alexander Milan, a native of Yugoslavia, was introduced by Mrs. Milton Anderson, and gave a program on "The Balkan Situation."

MRS. L. W. RORK,
Publicity Chairman.

The February meeting of the Dawson County Medical Auxiliary was devoted to "Socialized Medicine." Miss Ellen Svoboda, Cozad, gave her extemporaneous speech she had prepared in speech class, and Mrs. Ray Wycoff, Lexington, flavored her talk with personal observation of socialized medicine as she saw it during her trip abroad last summer.

Mrs. Samuel H. Perry has joined her husband, who was called to duty in December. They are in San Diego, California.

All members are giving their support to the Essay Contest sponsored by the Nebraska Medical Society. Personal contacts have been made to all high school principals.

MRS. CHARLES E. HRANAC,
Publicity Chairman.

Tri-County No. 3 auxiliary announce that Mrs. K. F. McDermott has recently accepted the chairmanship of the Home Service Department of the Red Cross.

MRS. JOHN S. ANDERSON,
President, Tri-County No. 3.

We regret to report that our State President, Mrs. Glenn D. Whitcomb, suffered a fractured wrist and head injury during a fall on the ice several weeks ago. We are happy, however, that at this writing she is making a satisfactory recovery at her home at 725 North 56th Street, Omaha.

MRS. K. KENNETH MUEHLIG,
State Chairman, Press - Publicity.

Because rheumatoid arthritis is usually seen in its advanced stages, it is necessary as a rule to give continuous therapy with either ACTH or cortisone, Dr. Theron Randolph, instructor in medicine, Northwestern University medical school, told the physicians at the seventh annual meeting of the American College of Allergists. "As a rule there is a recurrence within 48 hours after the drugs are discontinued. ACTH requires more injections than cortisone to keep the disease suppressed. Badly deformed joints do not regain normal function, but one can expect relief of pain." In prolonged treatment, such as is necessary here, Dr. Randolph warned, deleterious effects from both drugs are liable to occur.

News and Views

Dr. Frederick W. Niehaus, chairman of the cardiovascular section of the Nebraska State Medical Association, was elected president of the Nebraska Heart Association at the annual meeting February 17. He succeeds Dr. Harold C. Lueth, dean of the University of Nebraska College of Medicine, who served as the organization's first president.

Other new officers include Dr. Edmond Walsh, president-elect for 1952, and Dr. O. A. Kostal, Hastings, vice-president.

Nine physicians were elected to the board of trustees: Drs. Henry J. Lehnhoff, Jr., Raymond Wyrens, Robert S. Long, Clifford Hansen, Benjamin Slutzky, Harold Neu and Willis D. Wright, all of Omaha; Theodore Peterson, Holdrege, and Arthur L. Smith, Jr., of Lincoln.

A 25-thousand-dollar teaching grant to the Creighton University School of Medicine was announced early in March by the Public Health Service. The grant is to be used for the co-ordination of instruction on cancer and the procurement of cancer training materials. Dr. James F. Kelly was named coordinator of teaching activities under the grant.

This is the fourth year Creighton has received the Federal aid.

According to Dr. Kelly the money is to be used as in the past—to hire additional personnel and to round out equipment in cancer teaching.

The granting of assistance for medical care does not create any contractural relation between the county and the physician rendering service.

Attorney General C. S. Beck ruled that way Wednesday, February 28, in response to a query from State Assistance Director Neil Vandemoer.

Beck said the assistance is granted to the recipient for medical care but it is the recipient and not the county which contracts for the medical care.

Vandemoer had posed the question in reference to a case where a county authorized medical care and before payment was made by county warrant it was discovered the recipient was ineligible for assistance.

Representatives of forty-six health groups in the nation met in Chicago March 11-14 to seek ways to prevent chronic disease.

The conference was sponsored by the national Commission on Chronic Illness in cooperation with the U.S. Public Health Service and the National Health Council.

Delegates to the working conference included representatives of national voluntary and official agencies, professional organizations and individuals in the fields of medicine, hospitals, health, welfare, nursing, dentistry, journalism, education, social work, research and other related fields.

The 1951 meeting of the American Goiter Association will be held in the Deshler-Wallick Hotel, Columbus, Ohio, May 24th, 25th and 26th, 1951.

The program for the three day meeting will consist of papers dealing with goiter and other diseases of the thyroid gland, dry clinics and demonstrations.

Thompson, Brumm and Knepper Clinic, St. Joseph, Missouri, announces the second annual Dr. F. G. Thompson, Sr., Lectureship, "Surgery of the Esophagus," John H. Garlock, M.D., Professor of Clinical Surgery, Columbia University, and Chief of Surgery, Mt. Sinai Hospital, New York City, on May 10, 1951, at 8 p.m., in Clinic Building, 902 Edmond Street, St. Joseph, Missouri.

MINUTES OF MEETING OF BOARD OF COUNCILORS

February 25, 1951

The Annual Mid-Winter Meeting of the Council was held at the Hotel Cornhusker, Lincoln, Nebraska, February 25, 1951. The meeting was called to order at ten a.m. by Dr. Earl F. Leininger, Chairman of the Council.

Present were Drs. James Kelly, J. C. Waddell, W. E. Wright, R. T. Van Metre, Robert Harry, A. A. Ashby, R. R. Brady, Earl Leininger, Frank Herhahn, President Chas. Sheets, President-Elect D. B. Steenburg, Immediate Past President J. D. McCarthy, Speaker of the House of Delegates J. D. Bradley and Vice Speaker of the House of Delegates Fay Smith.

Also present were Drs. R. B. Adams, Maurice Frazer, Geo. R. Underwood, Earle G. Johnson, H. S. Morgan, K. S. J. Hohlen, L. W. Lee, H. M. Jahr, Harold Lueth, G. E. Peters, E. W. Hancock, Morris Nielsen, R. E. Garlinghouse, Floyd Rogers, C. F. Heider, P. M. Bancroft, Geo. Charlton, J. R. Kleyla and Mr. M. C. Smith.

The first order of business was the election of a Chairman and nominations were called for. Dr. Earl Leininger was nominated and a motion was made by Dr. Wm. Wright that the nominations be closed and Dr. Leininger be declared the unanimous choice of the Council for Chairman. The motion was seconded and carried.

Nominations for a secretary were called for by the chair and Dr. R. R. Brady was nominated. A motion was made that the nominations be closed and Dr. Brady also declared the unanimous choice of the Council Secretary.

A motion was made by Dr. R. E. Harry that the minutes of the previous meeting be adopted as published. The motion was seconded by Dr. Waddell and carried.

The report of the Secretary-Treasurer was called and Dr. R. B. Adams announced that he had nothing further to report than that printed in the brochure which would include the annual audit.

A motion was made by Dr. Wm. Wright that the report be accepted and published. The motion was seconded and carried.

Mr. M. C. Smith stated he had nothing further to add to the report of the Executive Secretary.

A motion was made by Dr. Waddell that the report of the Executive Secretary be accepted and published. The motion was seconded by Dr. R. E. Harry and carried.

The report of the Board of Trustees was called for and attention directed to the budget for 1952;

also that the trustees recommended that the budget for 1951 be amended to correspond with the 1952 budget.

A motion was made by Dr. R. T. Van Metre that the report be approved and published; that the 1952 budget be recommended for approval to the House of Delegates; and that the 1951 budget as amended be recommended to the house of Delegates for approval. The motion was seconded by Dr. Frank Herhahn and carried.

The Council at its meeting May 3, 1950, asked that a special committee be appointed to study membership classification and report back to the Council. In the absence of Dr. Clayton Andrews, Chairman of this committee, the report was read by Dr. R. R. Brady, Secretary of the Council.

A motion was made by Dr. James Kelly that Dr. Andrews' committee report be adopted and recommended to the House of Delegates. The motion was seconded by Dr. Wm. Wright and carried.

The report of the Committee on Allied Professions was called for and attention was directed to the printed report in the brochure.

A motion was made by Dr. Wm. Wright and seconded by Dr. James Kelly that the report be accepted and published. The motion carried.

Mr. M. C. Smith gave a brief history of the Committee on Emergency Medical Service and then read the report by Dr. J. J. Freymann, Chairman of the committee. He also read the report of the Sub-Committee on Atomic Injuries which was submitted by the Chairman, Dr. Howard Hunt.

A motion was made by Dr. R. E. Harry that both the reports be accepted and published. The motion was seconded by Dr. Wm. Wright and carried.

Dr. Adams made the announcement that dinner would be served at one o'clock in the Persian Room.

Dr. H. M. Jahr stated he had nothing further to report than the material in his Editor's Report which was in the printed brochure. He announced that the Committee on Journal and Publication was having a meeting this afternoon to discuss probable changes in format, etc.

Mr. M. C. Smith gave a brief summary of the rising cost in publication of the journal and why the cost increase was necessary.

A motion was made by Dr. J. C. Waddell that the Editor's Report be accepted and published. The motion was seconded by Dr. R. T. Van Metre and carried.

The report of the Committee on Medicolegal Advice submitted by Dr. R. W. Fouts, Chairman, was read by Mr. M. C. Smith. After reading the paper, Mr. Smith suggested that a resolution be sent Dr. Fouts from the Council which would indicate appreciation for his faithful attendance and work on this committee.

A motion was made by Dr. James Kelly that the report of the Committee on Medicolegal Advice be accepted and placed on file. The motion was seconded by Dr. R. E. Harry and carried.

A motion was made by Dr. James Kelly that the President appoint a committee to draw up the proper resolution or letter to Dr. Fouts. The motion was seconded by Dr. J. C. Waddell and carried.

The report of the Prepayment Medical Care Committee submitted by Dr. Donald Wilson was reviewed and the recommendations made by the committee were read by Dr. Earl Leininger, Chairman of the Council.

A motion was made by Dr. Frank Herhahn that the report be accepted and published and referred to the House of Delegates. The motion was seconded and carried.

Dr. Harold S. Morgan stated he had nothing further to add to his printed report of the Public Relations Committee but that he would like to call the attention of the Council to two things:

1. The invaluable information that is being collected as a result of Mr. Bradley's trips over the state.

2. That the work of the committee would be beamed to the component county medical societies throughout the year because it was felt that considerable more time should be given in various county and district societies at their meetings to medical economics and public relations.

A motion was made by Dr. R. E. Harry that the report be accepted and published. The motion was seconded by Dr. Wm. Wright and carried.

The report of the Rural Medical Service Committee was read by Dr. Earl Leininger.

A motion was made by Dr. James Kelly that the report be adopted and published. The motion was seconded by Dr. Frank Herhahn and carried.

The Maternal and Child Health Committee report was read by Dr. R. E. Garlinghouse, Chairman. In addition to the report first submitted, Dr. Garlinghouse read a letter which cited a typical case and which included a list and the price of the drugs used in the case.

General discussion followed and the suggestion made that the letter and list should be included with the report to be published. However, it was the opinion of the group that the case should be discussed before the House of Delegates but not published. Dr. J. D. Bradley stated if the letter and case were presented to the Speaker of the House of Delegates he would see that it was referred to the proper reference committee at the Annual Session in May.

A motion was made by Dr. James Kelly that the report of the Maternal and Child Health Committee be accepted and published, and that the case in question be sent to the House of Delegates for consideration.

Further discussion followed relative to recommendation No. 3 in the committee's report and an amendment was offered by Dr. Wm. Wright that No. 3 be stricken from the report before acceptance and publication. The amendment was accepted by Dr. Kelly. A second was called for and given by Dr. Herhahn and the amendment carried.

The original motion was seconded by Dr. Wm. Wright and the motion carried.

Dr. Morris Nielsen gave the report of the Council on Professional Ethics.

A motion was made by Dr. R. T. Van Metre and seconded by Dr. Wm. Wright that the report be accepted and the chairman commended. The motion carried.

Dr. Harold Morgan asked for permission of the floor and asked Dr. Nielsen if he thought any useful purpose could be gained by further publication of the committee's activities through the press.

Dr. James Kelly also raised the question as to whether or not the Bar Association should be apprised of the existence of such a council for the association.

Dr. J. D. McCarthy requested permission of the floor and asked that the total figures as submitted by Dr. Nielsen be sent to the Council on Medical Service of the American Medical Association to help with the study which this committee is now doing.

A motion was made by Dr. James Kelly that the Nebraska Bar Association be notified that the Nebraska State Medical Association has a grievance committee that will adjust differences between doctor and patient wherever possible. The motion was seconded by Dr. R. E. Harry and carried.

A motion was made by Dr. James Kelly that the figures, without names and cases, given in Dr. Nielsen's report be submitted to the A. M. A. in Chicago. The motion was seconded by Dr. Wm. Wright and carried.

Dr. J. D. McCarthy stated he had nothing further to report as Delegate to the American Medical Association than the material published.

A motion was made by Dr. Wm. Wright that the report be accepted as published. The motion was seconded and carried.

The report of the Committee on Medical Service was read by Dr. E. B. Reed, Chairman. Dr. Reed discussed some of the pending legislation which affected the medical profession, and stated that a report would be made later on this phase of the committee's work.

A motion was made by Dr. James Kelly that the report be accepted and placed on file. The motion was seconded by Dr. Frank Herhahn and carried.

Further discussion relative to bills now before the legislature followed, then the Council recessed for dinner.

The Council was called to order by Dr. Earl Leininger at 2 p.m. and Dr. Nielsen was given permission of the floor to read a letter which he had received from one of the councilors.

Mrs. R. E. Garlinghouse, Chairman of the Public Relations Committee of the Woman's Auxiliary, was presented. Mrs. Garlinghouse gave a brief history of the essay contest which is now being sponsored by the auxiliary and explained to the councilors how the workers were organized in each district. She also explained the functions of the judges in each district and the awards and prizes to be given in both district and state. She told of the publicity they had used and then answered questions which the councilors asked. A suggestion was made that a real publicity campaign be started in the newspapers previous to launching another such contest in the state. A further suggestion was made that a news release be gotten out immediately on the present contest.

Dr. Leininger thanked Mrs. Garlinghouse and the Council gave her a rising vote of appreciation.

Dr. George Underwood briefly discussed some of the pending legislation and called attention to the need for watchfulness on the part of everyone to see that the true conception of Public Health is maintained; that the welfare side or idea seemed to be gaining and that the true premise of public health was being left out. He further stated that his Committee on Public Health had nothing to report at this time but that their recommendations would somewhat depend on the outcome of the legislation now before the legislature.

Dr. Earle G. Johnson, Regent of the University of Nebraska, spoke briefly on the preceptorship program at the University of Nebraska College of Medicine. He stated that in his opinion so much of the practice of medicine was a psychological thing — that a doctor had to be able to talk to the farmer and the railroad man—and for the students to be with the doctors over the state who are doing good work certainly is of value to the medical students. Too, in his opinion, the smaller areas of the state are the best places to raise a family and to become a community leader. Dr. Johnson spoke of the grave need of the College of Medicine for additional funds to be able to maintain the classification of a Class A school and suggested that every possible effort should be made to support the budget they are asking.

Dr. Harold Lueth, Dean of the University of Nebraska College of Medicine also spoke briefly to the Council relative to the gravity of the situation regarding the financial needs of the college and their loss of professors should the school become less than a Class A school. He also told of the problems confronting the medical college in changing their program from a 9 months program to a 11-month program. By adding a quarter time it will be necessary to have more money to run the laboratories, more staff and more equipment. There will be a question of raising tuition which will have to be discussed and student loans will in all probability have to be greater in number and larger in amounts. Dr. Lueth stated he would be glad to have any suggestions which any member of the Council would offer, for if possible the new program would probably start in June.

General discussion followed relative to the former A.S.T.P. and V-12 programs which have not been revived and the importance of self-support on all phases of endeavor in Nebraska rather than depending upon support from Washington. No action was taken by the Council.

The Planning Committee report was read by Dr. Floyd Rogers. He also read the report of the Delegate to the North Central Conference.

Dr. J. D. Bradley asked for permission of the floor and gave a brief preview of how the House of Delegates would function at the Annual Session. He stated he planned to continue the use of reference committees and that all material would be assembled in advance of the meeting and sent to the reference committees which would also be appointed in advance of the session. Too, it was planned to set a definite meeting place and time for the various reference committees and let it be well known before the general sessions in order that everyone would have a chance to appear before the committees and discuss the problem or report. This in turn will give the reference committees time to make out a complete but brief report to the House of Delegats and thus do away with a lot of discussion in the House of Delegates. The function of the House of Delegates can thus be carried out in the time allotted. It was Dr. Bradley's suggestion too that should anyone have something to be brought up before the House of Delegates that if possible it be given to them in time so a study could be made and the facts learned.

A motion was made by Dr. Wm. Wright that the report of the Planning Committee be accepted and published. The motion was seconded by Dr. R. T. Van Metre and carried.

Dr. J. D. McCarthy made the suggestion that the Council send a word of sympathy to Dr. Charles McMartin and also a letter to Dr. R. W. Fouts for his faithful work during all the past years. It was suggested that a night letter should be sent to each and Dr. Sheets said he had been asked to make appointments on a committee for this purpose and named the following members of the Council as the committee: Drs. Earl F. Leininger, Chairman; Wm. Wright and R. E. Harry.

Dr. Leininger called attention to the report of the Cancer Committee as printed in the brochure.

A motion was made by Dr. Wm. Wright that the report be accepted and printed. The motion was seconded by Dr. R. E. Harry and carried.

The report of the Cardiovascular Committee was called for. The chairman had submitted a report and it was also printed in the brochure.

A motion was made by Dr. Frank Herhahn that the report be accepted and published. The motion was seconded by Dr. R. E. Harry and carried.

The report of the Cerebral Palsy Committee was reviewed.

A motion was made by Dr. Frank Herhahn and seconded by Dr. J. C. Waddell that the report be accepted and published. The motion carried.

The report of the Diabetes Committee had been submitted by Dr. Morris Margolin and was published in the brochure.

A motion was made by Dr. Wm. Wright, seconded by Dr. J. C. Waddell, that the report be accepted and published. The motion carried.

The report of the Fracture Committee was published in the brochure, and a motion was made by Dr. James Kelly that the report be accepted and published. The motion was seconded by Dr. Frank Herhahn and carried.

The Tuberculosis Committee report which had been submitted by Dr. J. H. Murphy, Chairman, was read by Dr. R. R. Brady, Secretary of the Council.

A motion was made by Dr. James Kelly that the report be accepted and published. The motion was seconded by Dr. Wm. Wright and carried.

Dr. L. W. Lee gave the report of the Venereal Disease Committee. He stated that the main effort of the committee was directed to the publishing of a paper which dealt with the results of five years experience in the various types of venereal disease and bringing up the management of diagnosis and treatment of various venereal diseases. He further stated that this paper was to be published in either the March or April issue of The Nebraska State Medical Journal.

A motion was made by Dr. Frank Herhahn that the report be accepted. The motion was seconded by Dr. R. E. Harry and carried.

Committee appointments for next year were read by Dr. D. B. Steenburg, President-Elect.

A motion was made by Dr. R. T. Ven Metre that the appointments be confirmed. The motion was seconded by Dr. R. E. Harry and carried.

Honorary memberships for Drs. Robert E. Marble, Bryan M. Riley, Chas. W. Pollard and Stanley G. Reed, all of Omaha, were presented to the Council.

A motion was made by Dr. R. E. Harry that these honorary memberships be tabled until membership classification is cleared by the House of Delegates. The motion was seconded by Dr. James Kelly and carried.

Telegrams were read pertaining to national legislation by Dr. Leininger. No action was taken.

A motion was made by Dr. Wm. Wright to adjourn. The motion was seconded by Dr. R. R. Brady and carried.

ANNUAL AUDIT AND COMMITTEE REPORTS

REPORT OF SECRETARY-TREASURER

The year 1950 was again a year of progress with the Nebraska State Medical Association. While we never can say that anything is really completed, most of our program was actively carried on and much progress was made. As has always been the case, some of our committees have done little or nothing, and some have done splendid work. The latter are the committees that have been from year to year doing good work. The total number of meetings held by the committees has been large. Reports of these meetings have gone to all members of the association through the medium of the Executive Secretary's bulletins. Several meetings of committees have been held in conjunction with groups from other professions and organizations. The committees doing admirable work are, namely, the Council on Professional Ethics, Dr. Morris Nielsen, Chairman; Emergency Medical Service, Dr. J. J. Freymann, Chairman; Medical Service, Dr. E. B. Reed, Chairman; Medicolegal Advice, Dr. R. W. Fouts, Chairman; the Planning Committee, Dr. Floyd Rogers, Chairman; Prepayment Medical Care, Dr. Donald Wilson, Chairman; Public Relations, Dr. Harold S. Morgan, Chairman; Rural Medical Service; Dr. E. F. Leininger, Chairman; Scientific Assembly, Dr. W. W. Waddell, Chairman; Speakers Bureau, Dr. R. O. Garlinghouse, Chairman; Cancer Committee, Dr. James F. Kelly, Chairman; Cerebral Palsy, Dr. Louis S. Campbell, Chairman; Diabetes Committee, Dr. Morris Margolin, Chairman; M.C.H. Committee, Dr. R. E. Garlinghouse, Chairman; Public Health Committee, Dr. George R. Underwood, Chairman. It would be difficult to say which committee has done its work best. It is readily seen that there are not many committees now that do little or no work, and some of these have had little or no work set up for them to do.

The annual meeting held at the Cornhusker Hotel in Lincoln in May, 1950, was one of our best. In addition to Nebraska doctors, guest speakers on the Scientific Program were composed of teams from three prominent medical schools; namely, Wayne University Medical College, Indiana University Medical Center, and Cornell University Medical College. The meetings were better attended than usual. There were more commercial exhibitors than ever before and the banquet drew the largest attendance on record. The banquet speaker, Dr. Ralph J. Gampell, until recently an English physician, was well liked.

The House of Delegates completed an unusual amount of work, and the Council also handled more work than usual. The attendance was large and up to previous years. The usual overlap between the House of Delegates and the general sessions occurred and was considered in the House of Delegate's meetings. A committee was appointed to study the conflict and report later.

Due to the fact that one item in both the Budget and Auditor's report was criticized last year, it has been thought best to itemize this particular item in the Secretary's Report this year. The item was that named Exceptional Travel and Exceptional Meetings and is as follows:

Exceptional Travel and Exceptional Meetings

Total			$3,750.71
ITEMIZED:			
North Central Medical Conference—Dues and Meeting Expense		$ 134.83	
Public Relations—			
Bradley visitations	$ 924.59		
Committee meeting expense	139.70	1,064.29	
Cerebral Palsy Committee		68.65	
M.C.H. Committee		17.30	
Prepayment Medical Care Committee		45.15	
Military Affairs Commitee		36.28	
Medical Service Committee		123.29	
Emergency Medical Service		44.26	
Emergency Medical Service and Board of Trustees		44.80	
Council on Professional Ethics		38.00	
Board of Trustees		15.55	
Diabetes Committee		15.81	
Speakers Bureau Committee		37.18	
Public Health Committee		57.88	
Scientific Assembly Committee		50.35	
Constitution and By-Laws Committee		22.00	
Planning Committee		43.20	
Allied Professions Committee		25.85	
Rural Medical Service Committee		27.35	
Delegates to A.M.A.		712.48	
Dr. H. M. Jahr (A.M.A., Council of Medical Service and Rural Medical Service		287.95	
Dr. R. B. Adams (C.ofC. Dues $25.00 and Midwest expense $10.06)		35.06	
Dr. McCarthy—Exhibit, Omaha Voc. Day		24.83	
Nebraska Medical Foundation		65.95	
Meeting with Nurses in Omaha		51.25	
Medical-Press-Radio Conference		67.25	
Presidents and Secretaries Conference		593.92	$3,750.71

Office Equipment

Total		$1,998.95
ITEMIZED:		
Line-A-Time	$ 33.39	
Clary Adding Machine	231.58	
Mimeograph and Stencil File	605.00	
Mimeograph Lettering Guides	13.00	
Stapling Machine	38.50	
Addressograph	578.70	
Folding Machine	495.38	
Ladder	3.40	$1,998.95

It will be noticed that the budget item of Office Equipment has been further detailed and in this detail will appear the purchase of several machines. These machines have speeded up the work in the office so drastically that the employment of another girl was made unnecessary, thus making the office cost lower in the long run. The Auditor's Report follows, which needs no further simplification.

Respectfully submitted,
R. B. ADAMS, M.D.,
Secretary-Treasurer.

AUDIT

Lincoln, Nebraska
January 31, 1951

Nebraska State Medical Association
Lincoln, Nebraska

Gentlemen:

We have examined the books and records of the Nebraska State Medical Association for the year 1950, and submit herewith our report. Included in the report are the following exhibits and schedules:

Exhibit A—Analysis of Fund Balances, January 1, 1950 to December 31, 1950.

Exhibit B—Statement of Receipts and Disbursements, for Year 1950.

Schedule B-1—Statement of Receipts and Disbursements, Annual Session, Year 1950.

Schedule B-2—Comparison of General Expense with Budget, Year 1950.

Exhibit C—Statement of Investments, January 1, 1950 to December 31, 1950.

Exhibit D—Journal Accounts Receivable, December 31, 1950.

EXHIBIT A

Exhibit A is the analysis of fund balances. During the year 1950 there was an increase in the balances of $1,184.80. The total balance on December 31, 1950 was $34,868.88, and was represented by cash in the National Bank of Commerce, Lincoln, Nebraska, of $8,519.80 and investments of $26,349.08.

EXHIBIT B

The details of the changes in the operating fund cash balance are shown in Exhibit B. In this statement the incomes and expenses have been divided into classifications of general items and journal transactions. Under the heading of General Income the principal items are membership dues of $34,410.00 and income from the annual session of $6,341.00. The chief item of income for the journal during the year was advertising of $12,303.18. Cash received for the American Medical Association dues of $$27,525.00 was remitted to that Association as shown under other disbursements in this statement. Total cash received during the year amount to $81,602.21.

The disbursements of the Association are divided into the same classifications as the receipts. The total amount of general disbursements was $37,964.88. A comparison of these items with the budget items approved for 1950 is shown in Schedule B-2. Journal expenses for the year totaled $15,184.51. Other disbursements amounted to $27,534.50, and total disbursements during the year were $80,683.89. The excess of receipts over disbursements amounted to $918.32, and cash on hand at the close of the year was $8,519.80.

All receipts for the year were traced through the books and into the bank account. In addition, test checks were made of letters of transmittal tracing the items to the individual members' accounts. All inspection of the members' unused cards in connection with our examination of the receipts indicated that all cards issued to members during the year were accounted for on the books of the Association. It was also found that during the year 1950 cards were issued to three military members and fifty honorary members, for which no dues were collected.

All cancelled checks for the year were inspected and compared to the items in the check register. Invoices and creditors' statements were examined covering the greater portion of the disbursements. The balances shown as cash in bank were confirmed by direct correspondence with the depositories. Our audit also included an examination of the minutes of the trustees' meetings during the year in regard to authorization of salaries, budgets and other disbursements. All securities were verified by actual examination. As a result of our audit of the receipts and disbursements of the Association for the year, it is our opinion that all cash has been accounted for properly.

EXHIBIT C

The changes that occurred in the investment account during the year are shown in Exhibit C. The cost value of the investments at the beginning of the year was $26,082.60. During the year there was a total addition in investments of $266.48. Dividend credits in building and loan accounts amounted to $108.83. The increase in value of the United States Savings Bonds during the year was $156.65. The investments include United States Savings Bonds, Series G, of $3,000.00 purchased during the year 1947 with cash from the Student Loan Fund. The total of the investments on December 31, 1950 was $26,349.08.

EXHIBIT D

Exhibit D is a list of the journal accounts receivable. Our examination of the accounts receivable record indicated that the greater part of these accounts are amounts receivable for advertising during the month of December, 1950. This record also indicated that with few exceptions these accounts are being paid currently. As the Association operates on the cash basis, these items are not taken into income until cash is received.

The Student Loan Fund managed by the Association is maintained in a checking account in the Omaha National Bank, Omaha, Nebraska. Cash on hand at the close of the year amounted to $1,169.63. This amount was confirmed to us by direct correspondence with the bank. The total amount of an unpaid student loan at the end of the year, including interest accrued, was $282.96. During the year no payments were received on this loan. Bonds purchased with cash from the Student Loan Fund are included with other investments in Exhibit C.

Mr. M. C. Smith, Executive Secretary of the Association, has in his possession a fund of $100.00 to be used for traveling and other Association expenses. This fund is replenished periodically upon his presentation of expense reports, and is not carried on the books of the Association as an asset.

There are additional funds of $$1,000.00 in cash kept in the Association's safety deposit box at the National Bank of Commerce, Lincoln, Nebraska. This amount was verified by actual count at the time of the examination of securities, and is not set up on the books as an asset. The purpose of this fund is to defray expenses of the Association, and to date none of it has been used.

Should any additional information be desired concerning any matters falling within the scope of our examination, we shall be pleased to supply it upon request.

Respectfully,
DANA F. COLE AND COMPANY

EXHIBIT A

NEBRASKA STATE MEDICAL ASSOCIATION
ANALYSIS OF FUND BALANCES
JANUARY 1, 1950 TO DECEMBER 31, 1950

Total Balance, January 1, 1950			$33,684.08
Represented by:			
Cash—National Bank of Commerce	$ 7,601.48		
Investments—Exhibit C	26,082.60		
	$33,684.08		
Add:			
Excess of Receipts over Disbursements—Exhibit B	918.32		
Net Increase in Investments—Exhibit C	266.48		1,184.80
Total Balance, December 31, 1950			$34,868.88
Represented by:			
Cash—National Bank of Commerce	$ 8,519.80		
Investments—Exhibit C	26,349.08		
	$34,868.88		

EXHIBIT B

NEBRASKA STATE MEDICAL ASSOCIATION
STATEMENT OF RECEIPTS AND DISBURSEMENTS
YEAR 1950

Cash on Hand, January 1, 1950			$ 7,601.48
RECEIPTS:			
General:			
Membership Dues	$34,410.00		
Interest Collected	344.38		
Annual Session—Schedule B-1	6,341.00		
Sale of Office Equipment—Addressograph	25.00		
A.M.A. Membership Expense Rebate	271.00		
Workmen's Compensation Court—Copies Fee Schedule	21.75	41,413.13	
Journal:			
Advertising	12,303.18		
Subscriptions	347.50		
Copies Sold	13.40	12,664.08	
Other Receipts:			
A.M.A. Dues		27,525.00	
TOTAL RECEIPTS		$81,602.21	
DISBURSEMENTS:			
General:			
Salaries and Social Security Taxes	$15,145.29		
Travel	1,108.27		
Office Expense:			
Rent	2,149.23		
Mimeograph	645.50		
Printing	492.35		
Postage	1,164.39		
Telephone and Telegraph	946.00		
Miscellaneous	439.74		
Councilor Expense	251.40		
Annual Session (Sch. B-1)	5,857.58		
Exceptional Meetings and /or Travel	3,750.71		
Audit Expense	295.00		
Medicolegal	600.00		
Office Equipment	1,998.95		
President's Expense	548.65		
Expendable Supplies	1,063.09		
Reappropriation (Social Security Taxes for Prior Years)	1,507.63	37,964.88	
Journal:			
Salaries	$ 5,640.00		
Advertising Commission Refund	3.06		
Publication Expense	7,104.64		
Press Clipping Service	217.48		
Color	1,348.04		
Tipping and Inserts	253.53		
Cuts	340.36		
Envelopes	27.40		
Expenses—Dr. Jahr	250.00	15,184.51	
Other Disbursements:			
A.M.A. Dues	$27,525.00		
Expenses Paid for Nebraska Medical Foundation	9.50	27,534.50	
TOTAL DISBURSEMENTS		$80,683.89	
EXCESS OF RECEIPTS OVER DISBURSEMENTS			$ 918.32
Cash on Hand, December 31, 1950			$ 8,519.80

SCHEDULE B-1

NEBRASKA STATE MEDICAL ASSOCIATION
STATEMENT OF RECEIPTS AND DISBURSEMENTS

Exhibits	$4,195.00	
Registration Fees	15.00	
Fun Night Income	1,040.00	
Banquet	1,091.00	$6,341.00
DISBURSEMENTS:		
Printing	508.63	
Badges	40.05	
Golf Tournament	22.00	
Exhibitors' Cocktail Party	333.05	
Booths	305.10	
Reporter	326.60	
Fun Night Expense	1,070.50	
Banquet	1,224.90	
President's Expense	141.09	
Guest Speakers	1,475.75	
Auxiliary—Flowers	50.00	
Miscellaneous	359.91	$5,857.58
EXCESS OF RECEIPTS OVER DISBURSEMENTS		$ 483.42

SCHEDULE B-2

NEBRASKA STATE MEDICAL ASSOCIATION
COMPARISON OF GENERAL EXPENSE WITH BUDGET
YEAR 1950

	Budget	Expense	Balance
Salaries and Social Security Taxes	$15,500.00	$15,145.29	$ 354.71
Travel	1,500.00	1,108.27	391.73
Office Expense:			
Rent	2,160.00	2,149.23	10.77
Mimeograph	650.00	645.50	4.50
Printing	800.00	492.35	307.65
Postage	1,500.00	1,164.39	335.61
Telephone	1,200.00	946.00	254.00
Miscellaneous	550.00	439.74	110.26
Councilor Expense	260.00	251.40	8.60
Annual Session	5,875.00	5.857.58	17.42
Audit Expense	300.00	295.00	5.00
Medicolegal	800.00	600.00	200.00
Attorney's Fees	200.00	-------	200.00
Office Equipment	2,000.00	1,998.95	1.05
President's Expense	550.00	549.75	.25
Exceptional Travel and /or Meetings	3,800.00	3,750.71	49.29
Expendable Supplies	1,065.00	1,063.09	1.91
Speakers' Bureau	700.00	------	700.00
Reappropriation	5,600.00	1,507.63	4,092.37
	$45,010	$37,964.88	$ 7,045.12

EXHIBIT C

NEBRASKA STATE MEDICAL ASSOCIATION
STATEMENT OF INVESTMENTS
JANUARY 1, 1950 TO DECEMBER 31, 1950

Total Balance, January 1, 1950			$26,082.60
Consisting of:			
Omaha Loan & Building Association		$ 1,864.21	
Nebraska Central Building & Loan Association		1,016.79	
Conservative Savings & Loan Association		1,549.08	
U. S. Treasury Bonds 2⅞%		4,500.00	
U. S. Savings Bonds (Issue Price $4,458.50; Maturity $6,025.00)		4,992.52	
U. S. Savings Bonds, Series G		12,100.00	
Postal Savings Bonds (Issue Price $50.00)		60.00	
		$26,082.60	
Additions:			
Dividend Credits:			
Omaha Loan & Building Association	$ 46.85		
Conservative Savings & Loan Association	31.13		
Nebraska Central Building & Loan Association	30.85	108.83	
Increase in Value—U. S. Savings Bonds:			
Total Increment, Dec. 31, 1950	690.67		
Total Increment December 31, 1950	690.67		
Total Increment December 31, 1949	534.02	156.65	
Interest Accrued—Postal Savings:			
Interest Accrued December 31, 1950	11.00		
Interest Accrued December 31, 1949	10.00	1.00	
Total Additions			$ 266.48
Total Balance, December 31, 1950			$26,349.08
Consists of:			
Omaha Loan & Building Association		$ 1,911.06	
Nebraska Central Building & Loan Association		1,047.64	
Conservative Savings & Loan Association		1,580.21	
U. S. Treasury Bonds 2⅞%		4,500.00	
U. S. Savings Bonds (Issue Price $4,458.50; Maturity Value $6.025.00)		5,149.17	
U. S. Savings Bonds, Series G		12,100.00	
Postal Savings Bonds (Issue Price $50.00)		61.00	
		$26,349.08	

EXHIBIT D
NEBRASKA STATE MEDICAL ASSOCIATION JOURNAL ACCOUNTS RECEIVABLE
DECEMBER 31, 1950

Allen Drug Store		$ 8.40
Coca-Cola Company		14.40
Gold and Company		14.40
Midwest Orthopedic Appliance Co.		99.00
Nebraska Typewriter Co.		93.60*
Siegel Office Equipment Co.		26.80
State Journal Advertising Bureau:		
Eli Lilly	$ 73.20	
Parke Davis	111.86	
S. H. Camp	23.46	
Winthrop-Stearns	20.40	
E. R. Squibb Sons	40.80	
C. B. Fleet	23.46	
Schering	50.49	
Merck and Co.	23.46	
Lederle Laboratory	45.90	
G. E. X-ray Corporation	23.46	
Wyeth, Inc.	20.40	
Chas. Pfizer Co.	91.80	
Camel	23.46	
Abbott	24.00	
Upjohn	23.46	
Eli Lilly Insert	81.60	
G. D. Searle	52.70	
Cook County Graduate School	7.14	
Wander Company	23.46	
Laboratory of Clinical Pathology	7.14	
Physicians Casualty	8.40	
Luzier's	27.60	
Ralph Sanatorium	12.24	
Chicago Medical Society	17.34	
Quincy X-ray	4.08	
Neurological Hospital	4.08	
Seiler Surgical Company	4.80	
Physicians Optical Co.	4.80	
University of Kansa	8.16	
Medical Protective Co.	7.14	
Birtcher Corporation	12.24	
Julius Schmid	23.46	
Ayerst, McKenna & Harrison	45.90	
Mead Johnson	40.80	1,012.69
TOTAL DECEMBER 31, 1950		$1,082.09

* Credit Balance

REPORT OF EXECUTIVE SECRETARY

The work of the Nebraska State Medical Association has gone forward on a broadened front during the past year. Much effort has gone into the national educational program. Advancement has been made through the efforts of our committees to carry on with the expanded program started last year. In addition, we have been concerned the last half of the year with the part which the Nebraska medical profession will play in a war-time economy.

This report will deal briefly with these three phases of association activity, leaving details to be provided by the reports of the various committees.

Early in the year it became evident that the increased volume of work in the headquarters office would require additional personnel or some method whereby the output could be increased with the present office force. After studying the problem, the Board of Trustees decided that the situation could best be met by adding to our office equipment. Accordingly, we purchased a new electric mimeograph to replace the one of antiquated vintage which had been in use for many years. Likewise, we purchased a new electric addressograph to replace the old hand machine. A new electric folder was also added. This machine accomplishes in a few minutes work that formerly required several hours of hand work. With the automatic mailing equipment which was purchased last year, your headquarters office is now able to operate at top efficiency and better serve the membership. The equipment will pay for itself in less than one year with the saving made in office personnel.

It might be of interest to the membership to learn that the incoming mail for the past year totaled 9,917 pieces—an increase of 3,211 over the previous year. Outgoing first class mail totaled 18,750 pieces—an increase over last year of almost 100 percent. Bulletins, committee minutes, news releases, etc., mailed out totaled 117 mailings. This mailing has been increased during the past year due to a policy of keeping our members as well informed as possible. Copies of committee minutes are now sent to all officers, members of all committees and secretaries of county societies. The activities of all committees are thus transmitted to the entire membership. Bulletins are sent to all members on a variety of subjects of interest. An informed membership is a cooperative membership.

Much energy during the past year has been channelled to the National Education Campaign with the climaxing national advertising campaign in October. Mr. Bradley, our executive assistant, has made a tour of the state, in contacting our members and supplying literature to be distributed to patients. Your executive secretary has been invited to appear before many lay groups in all parts of the state to discuss socialized medicine. The year has been one of accomplishment in this field and the results have been more than gratifying. The national advertising campaign was eminently successful in Nebraska and we have every reason to believe that very few of our citizens in Nebraska are uninformed regarding this national problem.

Our expanded program to better public relations has made noticeable advancement. The Public Health Committee has had four meetings during the year and is now responsible for a bill which has been introduced in the state legislature on health matters. The Diabetes Detection Week of our Committee on Diabetes received state-wide publicity. The Cerebral Palsy Committee has set up some worthwhile objectives which will no doubt result soon in some real accomplishment in this field. The Planning Committee has revised the Fee Schedule for Governmental Agencies which will be in print soon. The Maternal and Child Health Committee has had several meetings with the Board of Control on Old Age Assistance. The Public Relations Committe has created a physicians office personnel project which has received nation-wide recognition. These accomplishments are only a few that might be mentioned in more detail. This important phase of our association activities has had the active participation of an increasing number of our members. Fourteen of our committees have developed definite programs and held meetings during the year. Some of these committees have met as many as five times with a good attendance of members at all meetings. There is no doubt but that the relationships of the medical profession in Nebraska with other groups and with the public as a whole are now better than ever in our history.

Early in the year Dr. J. D. McCarthy, President, appointed a Committee on Emergency Medical Service at the request of the American Medical Association committee of the same name. This committee is to act as a cooperative committee on the state level. An active program has been developed on medical aspects of civil defense and the committee is cooperating with state agencies on defense plans in case of atomic warfare. With the advent of the Korean situation, President Charles Sheets appointed a Committee on Military Affairs to cooperate with state and national committees in the selection of medical personnel for the armed forces.

We have no way to forecast the future but our association is prepared to meet this type of emergency. While this committee is advisory only in function, it does provide a means whereby our own medical group will be consulted regarding the withdrawal of physicians from the state for military service and this committeee can advise regarding medical needs in protection of the home front.

WOMAN'S AUXILIARY ACTIVITY

The Woman's Auxiliary of the Nebraska State Medical Association is this year carrying on an activity which promises much benefit. Early in the year the decision was reached for the auxiliary to conduct a state-wide essay writing contest for third and fourth year high school students. Mrs. Glenn Whitcomb, President of the Woman's Auxiliary, appointed Mrs. Richard Garlinghouse chairman of a committee to plan and conduct the contest. The Board of Trustees approved five hundred dollars as prize money for contestants. Material has been sent out to all high schools and early reports of participation are very encouraging. The auxiliary has suddenly become a valuable group in our medical organization work. We would like to admonish all doctors in the state to encourage their wives to become active in this important group.

THE NEBRASKA STATE MEDICAL JOURNAL

The income for The Nebraska State Medical Journal showed a small increase of $726.45 over the previous year. However, increased operating costs for the year again produced a loss for the year's operation. The net loss for 1950 was $720.43. This compares with a loss of $807.81 for the previous year. At the December meeting of the Board of Trustees approval was given to increase the cost of publication an additional 10 percent. This increase had been requested by our publishers and was due to their increased cost of operation. The board felt that the request was justified. They also voted to increase the amount of subscription allowed from dues to journal publication to $2.50 per year. It has formerly been the practice to allot $1.50 per member as subscription to the journal.

MEMBERSHIP

Following are the usual membership tables, giving the state of membership at the close of 1950.

TABLE NO. 1

Members deceased	20	
Non-Members deceased	18	38
Members moved out of state	35	
Non-Members moved out of state	17	52
		90
New physicians in state—members	71	
Potential members	49	120
Net Gain		30
In active practice		1,432
Retired, but eligible		39
Members—		
December 31, 1950		1,200
December 31, 1949		1,196
Member Gain in 1950		4

TABLE NO. 2

Licensed Physicians:	
Residing out of state	669
Members (out of state, 44)	1,156
Non-eligible	27
Retired	39
Non-members—eligible	249
Unaccounted for (interns, home addresses, etc.)	125
Total	2,265

TABLE NO. 3

Members:	
Active	1,092
Honorary	41
Deceased (9 Honorary)	20
Service	3
Out of State	44
Total	1,200

During the past year your executive secretary has attended 43 committee meetings and sessions pertaining to official business of the association. In addition, he has addressed 32 different county society and lay groups. Eleven national and regional meetings have been attended outside the state. He was honored by an invitation as a guest speaker before the joint session of the Third Annual Conference of the National Education Campaign and the House of Delegates of the American Medical Association held at the Interim Session on December 7, 1950, at Cleveland, Ohio.

The 17th annual report is again completed—as have those previously—with an expression of appreciation to the doctors in Nebraska for such a fine spirit of cooperation. The service rendered to you by your headquarters office personnel is greatly enhanced by the cooperative efforts of our members.

Respectfully submitted,
M. C. SMITH,
Executive Secretary.

REPORT OF BOARD OF TRUSTEES

D. B. Steenburg, M.D., Chairman, Aurora; G. E. Peters, M.D., Randolph; Earle Johnson, M.D., Grand Island; J. E. M. Thomson, M.D., Lincoln; R. B. Adams, M.D., Lincoln.

This is the report and recommendations of the Board of Trustees for the year 1950.

Meetings were held quarterly and were well attended by the members of the board as well as other officers of the association. The business of the association has been executed and we have been able to stay within our budget. Our investments remain essentially unchanged.

AUDITORS REPORT

The report of our auditors is available to you and clearly sets forth our present financial condition.

SOCIAL SECURITY

We have sent the Collector of Internal Revenue a cheque in the amount of $1,507.63 which includes the amount in arrears plus interest charged but no penalty. This would seem to be the final settlement of Social Security on the personnel of the headquarters office.

NEBRASKA MEDICAL FOUNDATIONS, INC.

The cash in the Student Loan Fund was transferred to the Nebraska Medical Foundations, Inc.; the foundation to act as trustees for all items of the account; to identify it, separately to be used to finance loans to medical students and the foundation would be asked to give an annual report to the Board of Trustees. In case the foundation should expire the fund would then return to the Nebraska State Medical Association.

OFFICE EQUIPMENT

Because of the resignation of one of the office personnel and the increased office work load we were faced with either hiring two additional girls or modernizing our office equipment and hiring only one girl. It was decided to buy the additional equipment for approximately $1,900.

JOURNAL CONTRACT

I reported last year Mr. Gene Huse's offer to publish The Nebraska State Medical Journal for the next three years at present rates. Due to increased costs we have signed a new contract which increases our cost ten percent.

BUDGET FOR 1952

Salaries and Social Security	$16,500.00
Travel	1,500.00
Office:	
Rent	2,300.00
Mimeograph	800.00
Printing	1,000.00
Postage	1,200.00
Telephone and Telegraph	1,200.00
Miscellaneous	500.00
Council Expense	200.00
Annual Sessions	4,000.00
Exceptional Travel and Exceptional Meetings	3,500.00
Audit Expense	200.00
Dues, Share to Journal	2,000.00
Attorneys Fees	1,000.00
Medicolegal	800.00
Office Equipment	200.00
President's Expense	500.00
Speakers Bureau	500.00
Expendable Supplies	1,000.00
Reappropriate from Unexpended Balance	4,000.00
Total	$42,900.00

A motion was made that the above budget be presented to the Council with the request that it be recommended to the House of Delegates. The motion was seconded and carried.

It was also moved and seconded that the 1951 budget be amended to correspond with the budget of 1952.

Respectfully submitted,
DONALD B. STEENBURG, M.D.,
Chairman.

REPORT OF CANCER COMMITTEE

J. F. Kelly, M.D., Chairman, Omaha; J. T. McGreer, Jr., M.D., Lincoln; B. R. Bancroft, M.D., Kearney.

1. TUMOR CLINICS

The activities for the past year were much the same as during the past three or four years. Some new tumor clinics were started and one tumor clinic decided to become inactive, at least for the present. There are still several areas in the state in which tumor clinics might function successfully if the doctors in the area involved would decide on organizing.

The tumor clinics have proved their value in an educational way to the doctors and as a means of service to the patient in practically every instance in which they have been organized. Those intending to organize should keep in mind that they are entitled to two paid visiting specialists of their own choosing for each meeting. There are many available specialists experienced in the tumor clinic procedure available for these consultations.

Some secretarial record on the cases presented should be provided at the local level. The patients presented come through their family doctor and no general screening of unsponsored patients is permitted. After the patient is examined and returned to the dressing room a conference takes place which is often of some help to the family doctor in the management of his patient.

Meetings should occur on bimonthly intervals. All members of the Nebraska State Medical Association are automatically members of the Cancer Research and Education Society under whose auspices these tumor clinics are held.

2. LAY EDUCATION

The lay education on cancer is carried out as in former years by the Nebraska Division of the American Cancer Society under the direction of Dr. Harold Eggers. All the doctors of the state should cooperate in this activity and material for lectures, including some very fine movies on various cancer subjects to be presented to the layman, can be secured by a request to Dr. Eggers. Any doctor requested to speak to a lay group should accept the invitation as the public is anxious to keep informed.

For the first time in the history of the Nebraska Division of the American Cancer Society the quota was raised. The cancer detection centers are still impractical in our state. Through the tumor clinics and other measures employed to inform the doctor on the latest advances on cancer diagnosis it is hoped that every doctor's office in Nebraska will become a cancer detection center. Every doctor must learn the obvious signs of early cancer and know the essential steps in diagnosis. It is no disgrace to re-examine and re-examine, nor should one be criticized for calling in consultation. Thoroughness and sincerity is often what it takes to make a diagnosis on the early cancer case.

At the present time the American Cancer Society, Nebraska Division, has a full time Director, Mrs. Thomas L. Houlton, and a full time Assistant Director, Miss Carol Feuerstein, for field organization through the state, and Dr. Harold Eggers, Director of Lay Education, who is also full time.

It was decided by the Cancer Committee to continue to cooperate with the American Cancer Society for the present time. On the whole some worth while progress was made during the past year and we wish to thank all the other officers and committees of the Nebraska State Medical Association for their kind cooperation.

Respectfully submitted,
JAMES F. KELLY, M.D.,
Chairman.

REPORT OF CARDIOVASCULAR COMMITTEE

F. W. Niehaus, M.D., Chairman, Omaha; Arthur L. Smith, Jr., M.D., Lincoln; M. C. Howard, M.D., Omaha.

I wish to report the activities of the Cardiovascular Committee of the Nebraska State Medical Association as follows:

1. As February is the "Heart Month" designated by the American Heart Association, requests were sent to the secretaries of all sectional and component medical societies requesting that they help in the publicity of the heart work for this month. Also, if possible, that these societies have a meeting devoted to heart disease on that month. Up to the present we know that the Lancaster County and Douglas County societies are doing this.

2. The February issue of The Nebraska State Medical Journal is devoted to heart disease and the principal articles are on this subject.

3. The Cardiovascular Committee has cooperated wholeheartedly with the Nebraska Heart Association

in activities which emphasize the importance of heart disease and supporting this organization in their endeavors of education and research.

4. A meeting the latter part of February of one-half day will be held in Omaha. This date will be announced so that any who wish may attend this meeting devoted to heart disease.

Respectfully submitted,
F. W. NIEHAUS, M.D.,
Chairman.

REPORT OF CEREBRAL PALSY COMMITTEE

L. S. Campbell, M.D., Chairman, Omaha; Fred C. Ferciot, M.D., Lincoln; John M. Thomas, M.D., Omaha; S. L. Wolters, M.D., Lincoln; F. R. Barta, M.D., Omaha.

A Cerebral Palsy Committee of the Nebraska State Medical Association was appointed during the month of November, 1949, by past president, Dr. J. D. McCarthy. The named members constituting the original committee have continued to function, having been reappointed following the last meeting of the Nebraska State Medical Association.

Four regularly scheduled committee meetings have been held during 1950 with the accomplishments of almost all originally outlined objectives. All planning has been directed toward bettering existing facilities in this state for the care of cerebral palsy patients, together with a public educational program designed to help families afflicted with cerebral palsy reach available diagnostic and consultation centers. At a committee meeting on April 20, 1950, existing facilities in this state for diagnostic and consultation services were outlined and several days later, a mimeographed copy of this outline was sent as a bulletin to every physician in the state.

During the months of March and April, 1950, two news releases were given the newspapers and radio stations outlining this committee's functions, giving the names of diagnostic and consultation facilities available for the cerebral palsied

Although considerable good work has and is being done in this field in Nebraska, the committee has always felt that further facilities for inpatient care, directed toward rehabilitating these patients through physical, occupational, and speech therapy means should be made available. The committee felt that certain facilities might be available at the state Orthopedic Hospital for the establishment of such a center. Before any definite action was taken, the State Board of Control was consulted and they seemed receptive to such a plan. Dr. E. W. Hancock, Chief of Services for Crippled Children, Department of Assistance and Child Welfare for this state, also favored such a plan. According to the committee's plan, this unit would consist of from twelve to fifteen beds and an outline of proposed requirements for operating such a unit has been partially completed.

The following recommendation was sent to the Board of Control:

"The Cerebral Palsy Committee of the Nebraska State Medical Association at the regular meeting held December 1, 1950, unanimously recommends that any existing facilities in the state at this time for both inpatient and outpatient care of cerebral palsied children be utilized. It further recommends that a 12 to 15 bed unit at the state Orthopedic Hospital might be used for this purpose. The Nebraska State Medical Association realizes that considerable good work is already being done but that further expansion of this education and training program would be desirable. Further consultation with individuals who have had experience in setting up such units is strongly urged."

Committee members have also expressed a desire to have at least one scientific paper dealing with cerebral palsy on the program at the 1951 Nebraska State Medical Association meeting. Such a request was forwarded to Dr. R. B. Adams, Secretary-Treasurer, Nebraska State Medical Association, for consideration.

Respectfully submitted,
L. S. CAMPBELL, M.D.,
Chairman.

REPORT OF COMMITTEE ON ALLIED PROFESSIONS

E. W. Hancock, M.D., Chairman, Lincoln; R. R. Best, M.D., Omaha; R. W. Fouts, M.D., Omaha; R. R. Brady, M.D., Ainsworth; C. W. Guildner, M.D., Hastings.

This committee did not submit a report last year since it was appointed after the 1950 meeting of the Council.

The activities of the committee so far have been concerned entirely with the Nebraska State Nurses Association. Two meetings were held with representatives of this organization on January 16, 1950, and March 14, 1950. At both of these meetings, topics of mutual interest were discussed. At the second meeting, particularly, your committee endeavored to impress upon the nursing representatives the importance of a unified stand on national health legislation. On April 5, 1950, the Board of Directors of the Nebraska State Nurses Association unanimously adopted a resolution opposing compulsory health insurance. The nurses association is now making a state-wide survey of nursing resources. Your committee is cooperating in this survey to the extent of obtaining information regarding employment of nurses by private physicians. A questionnaire has been sent to approximately ten percent of the membership selected at random which is to be returned to the state office. The information obtained will be combined with that obtained from hospitals and other sources to give a fairly complete picture of the status of nursing services in Nebraska. The entire survey will be available to the committee and the medical association.

The committee has no recommendations except that it be directed to continue cooperation along the lines indicated in this report.

Respectfully submitted,
E. W. HANCOCK, M.D.,
Chairman.

REPORT OF DIABETES COMMITTEE

Morris Margolin, M.D., Chairman, Omaha; Joseph A. Pleiss, M.D., Omaha; Floyd Rogers, M.D., Lincoln; O. A. Kostal, M.D., Hastings; V. D. Norall, M.D., Lexington; Sanford Rathbun, M.D., Beatrice.

Your committee met on June 21, 1950, and formulated plans for the implementation of the free urine testing program during national Diabetes Week, November 12-18, 1950, such program having been adopted by the House of Delegates at its May 1950 meeting. A publicity program on both professional and lay levels was mapped out. This program was subsequently followed out in all details.

1. A letter addressed to all universities and colleges in the state of Nebraska was mailed out about September 1 urging them to include urinalyses for purposes of diabetes detection in the physical examinations of their students and faculty members.

2. A letter addressed to secretaries of component medical societies outlined the program of national Diabetes Week and offered speakers on both professional and lay levels for the use of these component societies. Several of these societies appointed their own diabetes committees for local supplementation of the state program.

3. Arrangement for speakers was made with the Speakers Bureau. The committee takes this opportunity to express its appreciation to the Speakers Bureau and its Chairman, Dr. R. O. Garlinghouse, for the wholehearted cooperation in this project.

4. News releases to the newspapers and radios were issued during the latter part of October and the first half of November urging the public to call upon their doctors for diabetes screening tests.

5. A packet was sent to all physician members of the association. This packet included:

(a) A bulletin prepared by the committee, urging routine urine tests on all patients coming to their offices during national Diabetes Week and free tests for glycosuria for those requesting service.

(b) A pamphlet "Finding the Diabetic in Your Community" prepared by and furnished us by the American Diabetes Association.

(c) A questionnaire summarizing the findings to be returned to the executive headquarters.

6. The Nebraska State Medical Journal for November 1950 included four excellent articles on diabetic problems, an editorial on diabetes detection, and an article in the organization section reporting the work of the committee and urging cooperation in the project from all physicians. This issue of the journal received favorable comment from the American Diabetes Association as an example worthy of emulation by other state medical journals. The committee wishes to express its appreciation to Editor H. M. Jahr and to the publications committee for this fine effort.

7. Results: 250 physicians returned their questionnaires with findings as follows: 8,627 tests were made, with 347 positives being found. 92 of these were previously unknown diabetics. In addition, the effort has served to stimulate many known diabetics to return to their doctors for checkup and treatment.

8. Recommendation: The committee respectfully recommends the continuation and the extension of this work for the year 1951-1952. In the expectation that the momentum already achieved will serve to augment the results in the coming years.

In conclusion the committee wishes to express its thanks to the headquarters staff for the fine accomplishments of our project.

Respectfully submitted,
M. MARGOLIN, M.D.,
Chairman.

REPORT OF EDITOR

There have been no editorial changes in The Nebraska State Medical Journal over the past year. An effort was made to include informational copy to a degree consistent with the size of our publication. To conserve space it has been necessary to utilize the smaller (8 point) type more frequently than in previous years. A possible change in face and type is now under discussion. The Committee on Journal and Publication is scheduled to meet on February 25.

The Diabetes issue in November 1950 brought many favorable comments from many sections in the United States. Acknowledgement is due to Dr. M. Margolin of Omaha and his committee for careful planning and excellent cooperation.

There has been a constant flow of good papers. At this writing there is a supply of galleys to extend to the May issue. Thus far there has been no solution to the problem of the long manuscript.

Thanks are again due to the Omaha Mid-West Clinical Society for its contribution of many excellent papers published in our journal. To our publishers, The Huse Publishing Company, we express appreciation for their patience and their cooperation.

Respectfully submitted,
HERMAN M. JAHR,
Editor.

REPORT OF MATERNAL AND CHILD HEALTH COMMITTEE

R. E. Garlinghouse, M.D., Chairman, Lincoln; R. W. Homan, M.D., Crete; L. S. McGoogan, M.D., Omaha.

The M.C.H. Committee is made up of the following members: Drs. Richard E. Garlinghouse, Lincoln, Chairman; Leon McGoogan, Omaha, and R. W. Homan, Crete. In addition, Dr. Wayne Waddell, Beatrice, and Dr. Floyd Rogers, Lincoln, are acting in an advisory capacity to this committee.

During the current year the M.C.H. Committee has had four meetings. Three meetings were held with the State Department of Assistance and Child Welfare and the State Board of Control, and the fourth meeting was held with Dr. Frank Ryder, Director, Department of Health, and Dr. Mary S. Bitner, Director of the Maternal and Child Health Division of the Department of Health.

The M.C.H. Committee acts only in an advisory capacity to the Department of Assistance and Child Welfare and the Board of Control. Both of these bodies have been very cooperative and willing to accept the suggestions of the state medical association.

At the May 24, 1950, meeting with the Department of Assistance and Board of Control, the action of the House of Delegates concerning the reduction of drug costs was reported. Some disappointment was expressed by the Board of Control that the House of Delegates did not see fit to adopt a formulary for Old Age Assistance recipients. However, it was decided to conduct an educational campaign and to urge the formation of committees from county medical societies to work with the county commissioners and county departments of assistance and child welfare, in the hope that some reduction in the cost of drugs could be accomplished. The M.C.H. Committee assumed the responsibility for initiating these activities. Two bulletins concerning the cost of drugs to old age recipients have been sent out to all members of the Nebraska State Medical Association and also to members of the Nebraska Pharmaceutical Association. Copies of these bulletins are herewith attached.

On July 20, 1950, the M.C.H. Committee again met with the State Department of Assistance and the State Board of Control. In addition, nine representatives of the Nebraska Pharmaceutical Association were in attendance. Much valuable information concerning cost of drugs was received from this latter group. It is very apparent that the druggists of the state are most anxious to cooperate with the doctors to reduce drug cost of Old Age Assistance recipients. They would not look with disfavor on a formularly if accomplished by the state medical association. It was also felt that much could be accomplished if a portion of the program of county and state society meetings was devoted to discussion of drug costs in general. A druggist should be invited to participate in such discussions.

On November 13, 1950, the M.C.H. Committee had the third meeting of the year with the State Department of Assistance and the Board of Control. At this meeting it was pointed out that the cost of drugs had increased 12.5% in the last quarter of the fiscal year 1949-50 as compared to the first quarter. During this same period medical fees had increased only 0.25%. The Board of Control is very well pleased with the cost of medical fees. However, they view with alarm the increasing cost of drugs to Old Age Assistance recipients. This committee feels that a formulary will be the ultimate outcome if this trend continues. The Board of Control has no desire to establish a formulary but may be forced to do so in order to keep the costs within the budget. The M.C.H. Committee feels that such a formulary should be established by the Nebraska State Medical Association. This could be done in cooperation with the Nebraska State Pharmaceutical Association. Some means of control would seem inevitable, and if the control were the burden of the state medical association, it would certainly be more acceptable to the doctors of the state than if it originated from the Board of Control.

On November 13, 1950, the M.C.H. Committee met with Dr. Ryder, Director, Department of Health, and Dr. Mary S. Bitner, Director of the Maternal and Child Health Division of the Department of Health. The booklets "Prenatal Care" and "Infant Care" were adopted for the visiting nurse's instruction material.

There was considerable discussion of maternal deaths in the state of Nebraska. Questionnaires have been sent out for every maternal death and these have accumulated without review. Authority for review of these records and the fixing of maternal deaths was discussed.

Circuit post-graduate course in obstetrics and pediatrics, the Colorado Premature Care Conference, and Maternal and Child Health Funds were also discussed.

A resolution has been received by this committee from the International Congress on Obstetrics and Gynecology. A copy of this resolution is herewith attached.

The M.C.H. Committee respectfully submits the following suggestions:

1. That each councilor urge the component societies in his district to form a commitee to work with the county department of assistance and county commissioners on problems of Old Age Assistance and Child Welfare.

2. That the councilors recommend to the House of Delegates that a formulary be adopted by the Nebraska State Medical Association, for use by the State Department of Assistance and Child Welfare.

3. That the resolution of the International Congress on Obstetrics and Gynecology be adopted as the official classification of cervical cancer of the Nebraska State Medical Association.

4. That the councilors urge each component society to devote one meeting each year to the cost of drugs and that a druggist be invited to participate in this meeting. It is also suggested that the Council recommend to the House of Delegates that such a program be made a part of each annual state association meeting.

Respectfully submitted,
R. E. GARLINGHOUSE, M.D.,
Chairman.

RESOLUTION ADOPTED ON CLASSIFICATIONS OF CERVICAL CANCER

Whereas the so-called League of Nations' Classification of Carcinoma of the Uterine Cervix is now in common use in many countries, but is not used exclusively in the United States of America, it is desirable that this classification, or an accepetable modification thereof, be adopted universally in order to reach a common ground of understanding. Therefore, a committee of duly appointed representatives of the Section of Obstetrics and Gynecology of the American Medical Association; the American Association of Obstetricians, Gynecologists, and Abdominal Surgeons, and the American Gynecological Society, meeting in session with the Editorial Committee of the Annual Report on the Results of Radiotherapy in Carcinoma of the Uterine Cervix on the occasion of the International and Fourth American Congress on Obstetrics and Gynecology at New York City on May 14-19, 1950, has agreed to propose the following modification of the classification adopted by the Health Organization of the League of Nations in 1937:

Stage O—Carcinoma in situ, also known as preinvasive carcinoma, introepithelial carcinoma and similar conditions.

Stage I—The carcinoma is strictly confined to the cervix.

Stage II—The carcinoma extends beyond the cervix, but has not reached the pelvic wall. The carcinoma involves the vagina, but not the lower third.

Stage III—The carcinoma has reached the pelvic wall. (On rectal examination no "cancer-free" space is found between the tumor and the pelvic wall). The carcinoma involves the lower third of the vagina.

Stage IV—The carcinoma involves the bladder or the rectum, or both, or has extended beyond the limits previously described.

Be it resolved that this Classification be termed the International Classification of the stages of Carcinoma of the Uterine Cervix, and that all organizations concerned with the problem on hand be approached to consider its adoption.

COMMITTEE

Section of Obstetrics and Gynecology, American Medical Association—Roy Calkins, M.D.; Walter Dannreuther, M.D., and William Mengert, M.D.

American Gynecological Society — Herbert Schmitz, M.D.; Ludwig Emge, M.D., and William P. Healy, M.D.

American Association of Obstetricians, Gynecologists, and Abdominal Surgeons—Bayard Carter, M.D.; Robert Faulkner, M.D., and James Corscaden, M.D.

Editorial Committee, Annual Report of Results of Radiotherapy in Carcinoma of the Uterine Cervix — James Heyman, M.D.; Malcolm Donaldson, M.D., and Joe V. Meigs, M.D.

REPORT OF PREPAYMENT MEDICAL CARE COMMITTEE

Donald J. Wilson, M.D., Chairman, Omaha; Harry Jakeman, M.D., Fremont; Orvis Neely, M.D., Lincoln.

The threat of some form of Compulsory Health Service is still with us regardless of definite successes throughout the United States in recent elections. The Prepayment Medical Care Committee of your association believes that the best bulwark against this threat is a strong system of Voluntary Hospital and Medical Care Insurance.

Figures for 1950 are not yet available; however, Voluntary Medical Care Insurance has grown tremendously since 1939 as shown in the figures below:

NUMBER OF INDIVIDUALS COVERED

		1939	1949	Gain in 10 Years
1.	Hospital Expense:			
	Group Insurance	1,260,000	17,697,000	16,437,000
	Blue Cross Plans	4,410,000	33,448,000	29,038,000
2.	Surgical Expense:			
	Group Insurance	630,000	15,590,000	14,960,000
	Blue Shield, etc.	167,000	14,628,000	14,461,000
3.	Medical Expense:			
	Group Insurance	--------	2,736,000	2,736,000
	Blue Shield, etc.	--------	8,508,000	8,508,000

The above does not include hospitalization and medical care policies carried by insurees individually (outside of groups and Blue Cross-Blue Shield). In addition, approximately 34,136,000 individuals are insured by various policies against loss of income due to disability.

In 1949 there were 78 Prepayment Medical Care Plans approved by medical societies, plus those plans which are strictly Blue Cross and Blue Shield coordinated, in the United States.

A number of the plans which are medical society approved are having difficulties at the present time, mainly for two reasons. First, the doctors who have backed the plan (and the officers and directors of the plan itself) want the participating physicians to get the most possible income for their services to the enrollees. This has resulted, in some instances, in benefits being increased faster than actuarial figures and even more experience itself indicate is wise. In some instances the Nebraska plan is one of these. Second, as always happens when policy holders become more familiar with their policies, they find they have wider coverage than they previously thought and much greater utilization results. The utilization incidence in Nebraska Blue Shield in 1947 was 16 claims for each 1,000 contracts. In 1949 it had jumped to 25 claims per 1,000 with an average of $30 per claim.

The two factors mentioned above prompted the Board of Directors to revise the cost of their contracts to the enrollees effective on the anniversary dates of the contracts, and also to increase the benefits.

The insurance commissioners in the various states are insisting upon much larger reserves than many of the plans have been able to create in view of greater benefits and greater utilization. It is believed by your committee that recent changes in the contract, increased income from certain classes of contract holders, and recently inaugurated changes in the method of accounting will be able to accomplish the requirements within the time limit set by the commissioner. It is desired to report to the Nebraska State Medical Association that the Nebraska Blue Shield contract is one of the most liberal in the nation. Even so, there are many services which the board recognizes are under compensated and they are as anxious as the physicians to raise the compensation as soon as possible.

COOPERATION

Your committee has received from the Blue Shield the most courteous treatment and has been represented at each meeting of the board by at least two of your members. Suggestions made by your representatives have always been well received. It is desired to thank the Board of Directors for their excellent consideration.

EDUCATION

Your committee is certain that the biggest obstacle in the smooth running of this three horse team — the patient, the physician and the Blue Shield—is getting the physician to know and understand the plan, its provisions and where he fits into the picture. If the physician really understood it, the committee is certain there would be very little difficulty. It is, therefore, recommended that each physician spend one hour studying the pamphlet entitled "Schedule of Benefits and Instructions to Physicians" which was mailed to all physicians in January.

To further the understanding of the physicians there will be another refresher course held for physicians at North Platte on Thursday, March 15, 1951. It is believed that former meetings of this type have been very helpful.

It has been disconcerting to the members of your committee to read complaints of patients against certain participating physicians, that they are failing to live up to their agreement and that they do not honor the service feature of their contract. As you will recall, this concerns the low income group, single persons with income of less than $1,800 per year and families with incomes of less than $2,600 per year, in which the participating physician has agreed to accept the schedule of the Blue Shield as payment in full for the service rendered. Admittedly, there are not many when one considers the number of cases rendered service. But there are too many! It may be well to state that the participating agreement is not only a moral one but a legal contract as well. In case of failure on the part of the physician to honor the agreement, either the patient or the insurer has access to legal recourse should either elect to do so.

Your committee is of the opinion that most cases in which there is misunderstanding have not come directly to the attention of the physician. In many offices, the discussion of payment for services rendered is delegated to the secretary, nurse or receptionist. Numerous patients are resentful of being questioned about their income even by the doctor, but doubly so by his assistant. After two or three patients have either refused to answer or given impertinent remarks, it is not surprising that the assistant gives up as a bad job. In most of these, however, the answer can be secured if the doctor himself will take a few minutes and explain to the patient what it means to the patient to give the information. Numerous cases substantiating this opinion are on record and your committee believes this is the best of public relations.

Your committee is constantly searching for better ways of telling the story to the physician. Any suggestions from you as individuals will be gladly received.

SERVICE TO THE LOW INCOME GROUP

With continual depreciation of the dollar, higher living costs and ever increasing taxes, we are convinced that more and more people are being pushed into the low income group. The upper border of the low income group (those for whom the service feature applies) was established several years ago by the House of Delegates as $1,800 for the single person and $2,600 for the family.

Your committee believes that today people with considerably higher incomes than this are actually in the low income group.

Your committee is also cognizant of the fact that the economic picture is very unstable and while it might be easy to raise these limits it would probably be very difficult to lower them later. Most places over the country have considerably raised their limits, some as high as $2,000 for the single person and $3,000 for the family.

Your committee recommends, however, and the Board of Directors of the Nebraska Blue Shield concurs, that the limits remain as at present (even though they are actually unrealistic) but that the physician of his own volition actually raise the lower income limit in his own office in each individual case according to its own merits. Many participating physicians are actually doing this in many of their cases at the present time.

INFORMATION

At the annual meeting of the Nebraska Blue Shield, January 24, 1951, a motion was unanimously approved expressing appreciation of the Board of Directors to all of those participating physicians in Nebraska who are accepting and furthering the service feature of the contract to the income group and thereby doing what they can to hold the line against further inflation and further depreciation of the dollar.

RECOMMENDATIONS

1. That cognizance be taken by the physicians of the rapid growth of Voluntary Hospital and Medical Care Insurance and that it be recognized as one of the greatest deterrents of Compulsary Health Service.
2. That physicians maintain their participating agreements at all costs, even though in certain services it may result in a little lower income to the physician. This will greatly help the non-profit Blue Shield (which our Nebraska State Medical Association sponsors) to build up the reserves required by the State Insurance Commissioner.
3. That physicians, especially participating physicians, expend the necessary time and effort to know and understand the provisions of the Blue Shield contract. That each physician read "Schedule of Benefits and Instructions to Physicians" published by the Blue Shield and mailed to all participating physicians in January. If it has been lost or misplaced another will be mailed upon request to the Blue Shield, Kilpatrick Bldg., Omaha.
4. That other "Educational Meetings" be held in various parts of the state like those held previously in Omaha.
5. That the physician spend a little more time personally in securing information regarding the income of his patients in order to determine whether the service of the contract applies and thus avoid misunderstandings.
6. That the designated upper limits of the low income group not be raised at the present time, but the individual physician realize that the present limits are unrealistic and that he, of his own volition, arbitrarily raise those limits in his own cases where the income is somewhat over the present limit but where he believes such action justified.

Respectfully submitted

DONALD J. WILSON, M.D.,
Chairman.

REPORT OF FRACTURE COMMITTEE

W. P. Jensen, M.D., Chairman, Omaha; C. F. Ferciot, M.D., Lincoln; James W. Martin, M.D., Omaha.

The various county medical societies should be advised, as they have been in the past, that speakers are available for meetings to speak on various fracture problems. All orthopaedists contacted by the committee have expressed willingness to speak on subjects pertaining to fractures or orthopaedics.

As was presented by Dr. Fred Ferciot at the meeting in December at Lincoln, the Fracture Committee feels that rather than have a speaker talk on a certain subject, the members of the local county society could bring in their problem cases or x-rays to be discussed at any given meeting. It is felt that this type of program might be more attractive to the local county societies.

The Fracture Committees in the past have been rather inactive and this is also true of this year's committee.

The members of the committee and the orthopaedists in this state are very willing to give their time in stimulating interest in this type of work and also helping the local societies with their fracture problems.

Respectfully submitted,

WERNER P. JENSEN, M.D.,
Chairman.

REPORT OF PLANNING COMMITTEE

F. L. Rogers, M.D., Chairman, Lincoln; Morris Nielsen, M.D., Blair; A. J. Offerman, M.D., Omaha; A. B. Anderson, M.D., Pawnee City; Fay Smith, M.D., Imperial.

The 1950 House of Delegates instructed the Planning Committee to interest themselves in three projects. First, the fee schedule; second, the question of a mid-winter meeting of the House of Delegates; and third, to consider the problem of an over-all plan for continuous scientific medical education in Nebraska.

1. FEE SCHEDULE

The Planning Committee after a year and a half's work have finally completed a revised fee schedule. All specialty groups, as well as general practitioner's, have contributed to this effort. In general, fees have been changed but little. Some have been increased and some have been decreased. Probably the particular change is that of better organization and the adding of certain proceedures that had formerly been omitted. We believe that this schedule will be in the hands of all the interested parties, that is, the doctors and the concerned governmental agencies within a very short time.

2. MID-WINTER MEETING OF THE HOUSE OF DELEGATES

The Planning Committee has given this question considerable thought. It involves a good many problems. We believe that further experience and deliberation are necessary before any recommendations are made.

3. CONTINUOUS MEDICAL EDUCATION

The Planning Committee has given this matter considerable thought. We have not been particularly aggressive in this matter for two reasons. First, that the many activities included in the expanded program are requiring so much of our various committees and officers that we do not feel that we should be hasty in adding another. However, we realize that this is a very basic and important question and should continue to receive our most careful attention. Another reason for withholding recommendation is that the world situation is such that unexpected responsibilities are being expected of our profession and these should receive our attention before launching of other new activities.

It is also the duty of the Planning Committee to recommend a broad plan for the activities of our association for the coming year. In view of the present world emergencies this is a most difficult assignment. It seems to me that we should give every support to aiding in the national emergency. This should definitely be our first line of endeavor. In addition to this, however, we should not lose sight of the fact that we have started on an extended program which is basically sound and which will certainly have far-reaching good effects. Every effort should be made to continue points outlined in this expanded program.

Respectfully submitted,
FLOYD L. ROGERS, M.D.,
Chairman.

REPORT OF DELEGATE TO THE NORTH CENTRAL CONFERENCE

The North Central Medical Conference was held on November 19, 1950, at the Raddison Hotel in Minneapolis. This again proved to be one of the most stimulating and outstanding medical meetings. Registration figures totaled 150, including general practitioners, surgeons, radiologists, anesthesiologists, pathologists and medical personnel from North Dakota, South Dakota, Iowa, Nebraska, Wisconsin and Minnesota. In order to again acquaint you with the purpose of this conference, I would like to quote from the Presidential address which was given by Dr. W. A. Wright of North Dakota. "The purpose of this conference has always been to discuss among ourselves in an atmosphere of freedom and tranquility various problems which the medical profession, not only of our own particular area, but of the United States as a whole. We have usually concerned ourselves with economic questions and today there will be a discussion of relationship among ourselves and between other groups. The value of this meeting is enhanced by the fact that leaders of the profession in each of the six member states come here with solid backgrounds of knowledge in medical, social, economic and administrative questions and are prepared to pool and share this knowledge so that as the result of these meetings some of the questions may be properly assembled."

Papers concerning the 82nd Congress and emergency medical service, and procurement and assignment were presented. Also, a message from the Board of Trustees to the American Medical Association. A most interesting panel dealing with the relationship of the medical profession to the hospitals and in particular reference to physicians employed by the hospital. This problem was discussed by pathologists, anesthesiologists and by Dr. Howard Hunt, who discussed the relationship of x-ray to the hospital. I believe the general consensus of these discussions might be summarized by quoting from a paper by Dr. L. J. Pankow of South Dakota. "In its zeal for furthering the welfare of the patient, medicine has consistently fostered ideas and sponsored developments that have grown into independent professions and associations. Sometimes these secondary professions and associations develop ideologies not to the best interest of the parent organization." Dr. Hunt who is chairman of our state committee on hospitals will undoubtedly further develop this subject.

I suppose it would be proper for me to humbly report to you that your delegate to the North Central Conference has been elected President-Elect of this organization.

Respectfully submitted,
FLOYD L. ROGERS, M.D.,
Delegate.

REPORT OF PUBLIC RELATIONS COMMITTEE

Harold S. Morgan, M.D., Chairman, Lincoln; John McGreer, Jr., M.D., Lincoln; Leroy W. Lee, M.D., Omaha; D. B. Wengert, M.D., Fremont; Harold N. Neu, M.D., Omaha; J. P. Gilligan, M.D., Nebraska City; Houghton F. Elias, M.D., Beatrice.

Your Public Relations Committee has divided its time about equally between the accomplishment of previously defined objectives and the projection and planning of new lines of endeavor. During the early months of the year considerable time and effort was devoted to the National Educational Campaign of the American Medical Association which reached its climax for the year with the launching of the nation-wide advertising campaign just prior to the fall elections. The results of these elections bear material witness as to the effectiveness of the entire program. While certain political victories were achieved, your committee is well aware of the fact that the fight is far from over and feels it is incumbent on the part of every individual physician to be on the alert for future attacks.

In June 1950 your committee met with the executive committee of the Nebraska Press Association and reveiewed the Code of Cooperation between medicine and the communication facilities. The feeling of this joint group was that the rapport between the press, radio and medicine was considerably improved. A second medical-press-radio conference is planned and will be held in conjunction with the annual conference of county society presidents and secretaries. Your committee feels that good public relations exists when individuals and groups fully understand the ideals and the aims of the other groups. In the press and radio, medicine has a strong ally in its fight against socialism and a common meeting ground to discuss these ideas and to clear away misconceptions is provided through conferences such as we have outlined.

Any program to be successful must merit the confidence of the individuals making up the organization. In order to evaluate the expanded program of the Nebraska State Medical Association your committee directed that Mr. Bradley conduct a personal survey of the individual members of the organization. To date this personalized visitation with the members is complete with the exception of Omaha and Lincoln. The results, while tabulated as yet, are most encouraging and will, I am sure, be of material assistance to this committee and to the officers of your association in the promulgation of future activities. The one thing that stands out in all the reports is the fact that the physician interviewed was "downright glad" of the opportunity to visit with a representative of his own organization and voice his approval or disapproval. This is an example of improved public relations within our own group.

In order that we, your Public Relations Committee members, know what is in prospect in so far as the national public relations program is concerned, two members—Drs. Elias and Wengert—attended the Public Relations Conference and the National Educational Conference at the mid-winter session of the American Medical Association. A new stimulus has been given the work of the committee as a direct result of this trip.

Long range planning of the committee is concerned with public relations at county and individual levels. Two regional conferences are planned for this fall. These will be similar in nature to the two that were held last year and should be of considerable interest. In addition, radio programs utilizing American Medical Association produced dramatizations of health and medical activities are already underway. The members of the extended Public Relations Committee will play an important part in making contacts with the radio stations. It is also proposed to continue the sending of bulletins to the physicians' office personnel. Three of these have already been sent out and in the main they carry the thought that the office secretary or nurse is responsible in a large degree for the good or bad public relations of her doctor-boss. This approach to the personal public relations angle has won national acclaim for our society and the American Medical Association has requested copies of these bulletins in order that other component societies may start a similar campaign.

A report from the Public Relations Committee would not be complete without mention and praise of the activities of the Woman's Auxiliary. Mention of the auxiliary sponsored essay contest has already been made in another report and at this time it would appear that the success of the program is assured. In the auxiliary we have a potent fighting force that is ready and willing to help in any activity of the association. It is planned to use this force to even greater extent during the forthcoming two years as it becomes increasingly evident that the issue of socialized medicine has not been shelved by the administration.

Finally, and in conclusion, may we point out that in the final analysis the success or failure of any program designed to improve public relations depends on the individual doctors of the state. If the office staff is discourteous, the doctor suffers. If the doctor encourages adverse criticism by his actions of his fees, not only does he suffer, but the other physicians of the community suffer also.

The people of the country want wise and sympathetic medical care at a price that they can afford to pay. If they lose confidence in the fact that their personal physician can give this type of care, they quite obviously turn to those who promise them utopia. It is up to the individual doctor to see this does not happen!

Respectfully submitted,
HAROLD S. MORGAN, M.D.,
Chairman.

REPORT OF COMMITTEE ON EMERGENCY MEDICAL SERVICE

J. J. Freymann, M.D., Chairman, Omaha; Neil J. Everitt, M.D., Omaha; Roy Whitham, M.D., Lincoln; G. F. Waltemath, M.D., North Platte; J. P. Redgwick, M.D., Omaha; Donald Watson, M.D., Grand Island; J. T. Hanna, M.D., Scottsbluff.

The Committee on Emergency Medical Service of the Nebraska State Medical Association was appointed by President McCarthy on March 7th, 1950, and re-appointed by President Sheets on May 8th, 1950.

The membership of the committee is as follows: Doctors Neil J. Everitt and J. P. Redgwick of Omaha, Roy Whitham of Lincoln, Donald Watson of Grand Island, G. F. Waltemath of North Platte, J. T. Hanna of Scottsbluff, and Chairman John J. Freymann of Omaha.

After activation of the committee at its organization meeting on April 24th, the chairman proceeded to Chicago to confer with the secretary of the Council on Emergency Medical Service and to attend a meeting of that council on May 6th. That meeting was devoted to a general discussion of the overall scope of civil defense with special emphasis upon the responsibilities of organized medicine.

Information obtained at the Chicago meeting was the subject for discussion at the next meeting of the committee on June 19th. The committee at that time took cognizance of the fact that little or nothing had yet been done in the State of Nebraska toward the initiation of a Civil Defense Program. Since medical services constitute only one phase of over-all civil defense planning, the committee decided that definite plans for the rendering of health and medical services would have to be held in abeyance pending the initiation of a program by the Governor.

On July 20th, representatives of our committee advised the Governor that the Nebraska State Medical Association was anxious to proceed with civil defense planning, and we submitted to the Governor a proposed blue print for a State Civil Defense Organization. The proposals submitted were based upon the Nebraska Advisory Defense Committee Act of May 14th, 1949, upon recommendations contained in a letter to the Governor from the National Security Resources Board, and upon a policy defined by the Council on Emergency Medical Service of the American Medical Association.

During the following week the Governor proclaimed the existence of a state of emergency. According to statute, such a proclamation was required to enable the Governor to appoint a Civil Defense Advisory Committee and a State Director of Civil Defense. Although Mr. Edward Gillette, the State Treasurer, was appointed Acting Director of Civil Defense almost immediately, the organization of the Civil Defense Advisory Committee was not accomplished until late in December.

While awaiting activation of the State Civil Defense Advisory Committee, our committee, at a meeting held on September 17th, initiated measures to accomplish the appointment and activation of local committees on Emergency Medical Service to cooperate with local civil defense directors who would in due course be appointed by the Governor.

After the September meeting and in accordance with a recommendation submitted by our committee, Doctor Sheets appointed a Subcommittee on Atomic Injuries with Doctor Howard Hunt of Omaha as Chairman and Doctors George Underwood and Marshall Neely of Lincoln as members. This is an educational committee charged with the responsibility of educating doctors and disseminating to the public information concerning the medical aspects of atomic, chemical and biological warfare.

Pursuant to a recommendaton adopted by the committee and conveyed to the Governor, Doctor Roy Whitham, a member of our committee, was appointed representative of the Nebraska State Medical Association on the Governor's Civil Defense Advisory Committee. The Director of Civil Defense then appointed Doctor Whitham chairman of a subcommittee which will advise the Defense Director on matters relating to the mobilization of health and medical services. Doctor Whitham's committee will comprise representatives of the Public Health Service, Nebraska State Dental Association, Nebraska State Nurses Association, Nebraska Pharmaceutical Association, State Veterinarians Association, Nebraska Hospital Association, Red Cross, morticians and dealers in surgical and hospital supplies.

The State Defense Director, Mr. Gillette, and the Governor's Administrative Assistant, Mr. James Pittinger, attended and participated in the committee's discussions on January 7th, 1951. Proposed administrative procedures for the guidance of the medical and allied professions had been set forth in a manual entitled "Health Services and Special Weapons Defense," issued by the Federal Civil Defense Administration and released on December 27th, 1950. Since civil defense is far-reaching in its scope and involves training and preparation for mutual aid between distant as well as neighboring communities, the need for uniformity of organization and standardization of procedure is evident. The committee therefore recommended that the Nebraska State Medical Association should, in as far as it may be practicable, conform with the administrative procedures recommended in the Federal Civil Defense Administration's manual. In so doing, the medical association will best accomplish its mission in the civil defense program and cooperate most effectively with other agencies which must, of necessity, participate in the program and which will also endeavor to gear their activities to a standard blueprint.

Under the state civil defense organization, as now constituted, broad objectives will be defined and coordinated by the Governor's Civil Defense Advisory Committee. The accomplishment of these objectives, as they relate to health and medical services, will be delegated to our association. To that end, our local committees have been asked to contact and cooperate with the civil defense directors in their respective communities, and the State Director of Civil Defense has instructed local directors to consult with the respective communities, and the State Director of Civil Defense has instructed local directors to consult with the respective county medical societies regarding the selection of doctors to serve on local civil defense committees.

From this report it is quite evident that civil defense in Nebraska has not yet passed the planning stage. There is still a tremendous job ahead. In a communication to our Executive Secretary, Mr. Merrill Smith, the Director of Civil Defense wrote: "I want to express my personal appreciation for the aggressive steps which your association has taken in not waiting to be asked, but in going ahead and projecting your services to the local authorities." Beyond offering our services, we have as yet accomplished very little. Spirited effort and coordinated work on the part of every component of our association will be required to accomplish the organization and training of medical and auxiliary personnel necessary to cope with a major local disaster or to render effective aid in any area where assistance might be needed.

Respectfully submitted,
J. J. FREYMANN,
Chairman.

NOTE: Read before the Council as a subcommittee report of the Committee on Emergency Medical Service.

Dr. Hunt, reporting for the Nebraska State Medical Association, reported that an advisory committee on civilian defense and chairman of civilian defense committees have been appointed in all County Medical Associations. It is urged that the civilian defense director in each city and district throughout the state contact the chairman of the civilian defense committee of the local County Medical Society. The medical defense effort can be most effectively organized and directed through the machinery of the County Medical Society since all professional group activities are cleared and responsibilities assigned through these channels. The County Medical Society is so organized as to integrate its activities most efficiently with the affiliated and cooperative services in the civilian defense program. The appointment of a health service chairman, not acceptable to the County Medical Society introduces frustrating complications. The Nebraska State Medical Association assures the committee of its whole hearted cooperation and support.

Dr. Hunt, reporting as radiologist to the committee, stated that injuries from radiation represent only about 15% of casualties from atomic disaster due to an air burst such as might be anticipated in Nebraska. Major injuries would result from blast and burns. An instructional course covering the principles of monitoring could be presented before selected teachers of physics in the colleges and larger high schools in regard to the principles of radiation monitoring. At the present time no satisfactory instruments for civilian monitoring are in production. The current laboratory instruments are too sensitive for regional monitoring although well adapted for the detection of contamination of water, foods, and personnel and are adaptable for instruction. Improved instruments for high intensity monitoring are being developed by the Armed Forces at this time.

HOWARD B. HUNT, M.D.

REPORT OF RURAL MEDICAL SERVICE COMMITTEE

E. F. Leininger, M.D., Chairman, McCook; R. L. Cassel, M.D., Fairbury; R. E. Penry, M.D., Hebron; Charles F. Ashby, M.D., Geneva; Ray Wycoff, M.D., Lexington; E. G. Brillhart, M.D., Columbus; Dan Nye, M.D., Kearney.

The Committee on Rural Medical Service has had one meeting so far this year. It was held on Thursday evening, January 25, 1951, at the University Club in Lincoln, Nebraska.

The following were the committee members: Drs. E. F. Leininger, Chairman, McCook; Ray Wycoff, Lexington; E. G. Brillhart, Columbus; Dan Nye, Kearney; and Charles Ashby of Geneva. Mr. M. C. Smith, Executive Secretary, and Mr. Sidney Bradley, his assistant, of Lincoln, were both present. Mr. Floyd Edwards and Mr. Bill Fogarty were also present to represent the Nebraska Blue Cross and Blue Shield Plans. They outlined what is being done to enroll Nebraskas' rural people. These men appeared at the invitation of your chairman, who had been asked to make a study of the Blue Cross and Blue Shield Plan in Nebraska as to how it affected rural people. They stated in 1950 the Blue Shield paid Nebraska doctors $1,100,609, and the Blue Cross paid the hospital about $1,500,000. They stated that the statistics show that Blue Shield is progressing more rapidly than the Blue Cross. Until 1947 Mr. Edwards stated there was no plan for the enrollment of community groups. There are now 110 communities enrolled, with 60% of these being accomplished in the past year. He stated some communities were refused contracts because the required percentage of persons was not received. After making a study of 12 other state plans, individual enrollments are being offered at a premium which is 35% higher than group enrollments. It makes it possible for all rural people to enroll under the Blue Cross and Blue Shield Plan. Referring to the part doctors and their staff play in such enrollments, they stressed that "one word from a doctor" carries more prestige than any other selling media.

Dr. Ray Wycoff of Lexington made a report on the nurse recruitment progress in Nebraska.

The committee agreed that immunization and pre-school examinations are worth while and should be encouraged in all Nebraska schools.

A discussion of a plan whereby members of the committee would speak to medical students on the aspects and desirability of rural general practice was carried out. It is the hope of this committee that we will have progress and will be able to instigate it in the fall of 1951.

A year ago your Planning Committee set up the machinery for the formation of a State Health Council which in turn would set up local councils. The committee was prepared to assist in setting up the local health council, but due to unforeseen complications, the plan was dropped. I hope that we will be able to set up the health council on the local level, in place of the state level, beginning in the near future.

The 6th Conference of the American Rural Health will be held in Memphis, Tennessee, February 23 and 24, 1951, and Dr. E. G. Brillhart of Columbus, Nebraska, has consented to attend that meeting as our representative.

The next meeting of the Rural Medical Committee has been set for March 8, 1951.

Respectfully submitted,
E. F. LEININGER, M.D.,
Chairman.

REPORT OF TUBERCULOSIS COMMITTEE

J. Harry Murphy, M.D., Chairman, Omaha; A. I. Webman, M.D., Superior; Arthur Anderson, M.D., Lexington.

TRUDEAU SOCIETY

The committee discussed the activities of the American Trudeau Society, a scientific assembly for the study of tuberculosis problems. It felt that all members of the Nebraska State Medical Association should be encouraged to join the society. In order to stimulate greater awareness of tuberculosis and interest in its study, case-finding, prevention and treatment, enrollment in the Trudeau Society is recommended to the membership of the Nebraska State Medical Association. Modern medical and surgical treatment of the active case of tuberculosis has progressed rapidly in the last one and a half decades. The Trudeau Society is the national medical organization associated with the National Tuberculosis Association. In this society is centered the scientific discussion and dissemination of all the phases of tuberculosis control and treatment. These objectives are accomplished by national and state meetings, by conduct of medical research, provision of guides on tuberculosis clinic procedures, research, conduct of mass x-ray surveys and follow-up techniques. The official journal of the society is the American Review of Tuberculosis. It is a monthly periodical containing original articles and abstracts. Membership is open to physicians in good standing. The dues for active membership are $12.00. This includes affiliation with the National Tuberculosis Association, a subscription to the monthly bulletin of the association, a selection of books and current publications and a year's subscription to the scientific journal, The American Review of Tuberculosis.

TB STATISTICAL REPORTS

The statistical report of tuberculosis deaths and reported cases shows that there is a discrepancy between the number of reported cases and deaths. This is largely due to faulty reporting by doctors rather than incorrect diagnosis because not many "doctors are missing TB." The committee, therefore, recommends that Nebraska doctors make certain that all tuberculosis cases are reported to the state health department.

REHABILITATION CENTERS

Committee members feel that some facilities ought to be set up to give rehabilitation training to tubercular patients after they are released from the hospital, either in designated centers or in the home. To accomplish this, the committee adopted the following motion: "It is recommended that the Nebraska State Medical Association should encourage establishment of rehabilitation center or centers, similar to those now established for the physically handicapped, wherein convalescent tuberculosis patients may be assisted in their return to their places in society." Your committee thought that these centers might be set up in some of the state hospitals.

TB TESTS FOR SCHOOL CHILDREN

Your committee discussed the importance of finding tubercular patients in the early stages. It was agreed that one of the best ways to do this was to carefully check all school children. To accomplish this, the committee asks all members of the Nebraska State Medical Association who give school children examinations to routinely include tuberculin tests—and follow-up positive reactors—on children first entering school and those entering high school.

ANTI-TUBERCULOSIS PROGRAMS

Committee members suggested that all doctors who participate in local city or county health centers should promote anti-tuberculosis programs. Such programs might include case-finding activities by tuberculin testing and mass x-rays, with a follow-up of suspected cases by individual investigation. In these investigations, your committee suggested that doctors enlist the help of a health nurse and the Nebraska Tuberculosis Association.

NEED FOR HOSPITAL BEDS AND TEACHING FACILITIES

It was unanimously agreed that there is a need in Nebraska for more hospital beds for the care of tubercular patients. Perhaps these beds may now be available at the Douglas County Hospital in Omaha. Since these beds could be utilized, it would be unwise for the state to build new facilities for this purpose. The State Department of Health seems to be in favor of the plan. One of the important aspects of this proposal is that it would permit medical school students, from both Creighton University School of Medicine and the University of Nebraska College of Medicine, to study acute tuberculosis patients in order to gain better knowledge of their diagnosis and treatment.

It has been recommended to the State Department of Health that the Board of Control provide additional beds in the eastern part of the state for the care of tuberculosis patients on a state-wide basis. It was seconded by Dr. Webman and carried. The chairman consulted with the Department of Health and Board of Control on the subject after making the proper investigation as to the availability of the beds at the Douglas County Hospital. Action has also been stimulated on the part of the Nebraska Tuberculosis Association to encourage the recommended action.

SPEAKER AT ANNUAL SESSION

The Nebraska Tuberculosis Association will pay the cost of a speaker presenting a tuberculosis paper at the Annual Session of the Nebraska State Medical Association. The proffered tuberculosis speaker has been recommended to Dr. R. B. Adams.

To stimulate interest in tuberculosis, the committee recommends renewed activity in case-finding and in cooperation with the Nebraska Tuberculosis Association, instruction courses in tuberculosis diagnosis and treatment can be obtained for those of our members who may wish them. Also there are funds available in county committees of the association which may be used in case-finding, follow-up, tuberculin testing, etc.

Respectfully submitted,
J. HARRY MURPHY, M.D.,
Chairman.

REPORT OF COMMITTEE ON MEMBERSHIP CLASSIFICATION

Clayton F. Andrews, M.D., Chairman, Lincoln; Earl F. Leininger, M.D., McCook; Harvey L. Clarke, Jr., M.D., North Platte.

At the meeting of the Council, May 3, 1950, Drs. Clayton Andrews, Lincoln; Earl F. Leininger, McCook, and Harvey L. Clarke, Jr., North Platte, were appointed as a committee to suggest changes in Chapter I, Section 5 of the By-Laws regarding the different types of memberships. Below are the changes signed by all of the committee members which we trust will prove satisfactory to the Council.

BY-LAWS—CHAPTER I, SECTION 5

Life Membership may be bestowed upon a member who makes a written application to his component society and who receives the recommendation of the component society in which he holds membership. This recommendation may be made by two-thirds vote of the Board of Councilors in regular session and the approval of the House of Delegates. A candidate for Life Membership must be retired from active practice because of age, disability, or other good cause. Such Life Members shall not pay dues and shall have no vote or right to hold constitutional office, but they may participate in the meetings of the annual sessions and shall receive, without cost, all official publications of the society, and may become an Associate Member of the American Medical Association.

Honorary membership may be bestowed upon any member or other individual who has rendered outstanding or humanitarian service by a two-thirds vote of the Board of Councilors and approval of the House of Delegates. If bestowed upon a member of the society, this membership shall in no wise effect his regular constitutional rights or financial relationship with the society. If conferred upon a non-member, he shall have no constitutional rights or financial obligations. Proposal for such membership may originate in a component society or by the Board of Councilors.

The society may, upon two-thirds vote of the Board of Councilors and upon approval of the House of Delegates, award to a member who has rendered exceptionally distinguished service to the society a Distinguished Service Certificate. Such nomination may be made by a component society or by the Board of Councilors and shall in no wise effect such member's constitutional rights or his financial relationship with the society.

Respectfully submitted,
CLAYTON F. ANDREWS, M.D.,
Chairman.

NEBRASKA STATE DEPARTMENT OF HEALTH

A three-day training course in Nursing Aspects of Atomic Warfare is to be held in Lincoln, April 25, 26 and 27 at the Hotel Lincoln. This course is sponsored by the State Health Department, the Nebraska State Nurses' Association and the State Office of Civil Defense. Thirty Nebraska nurses are to be selected to take this course as a part of a program of training for civil defense. Nurses thus prepared are to return to their own communities and teach groups of nurses. The nursing faculty for the training course is composed of six Nebraska Nurses who attended a similar course in Denver, Colorado, February 5-9. These nurses are: Sr. Ruth Kauffman, Immanuel Hospital, Omaha; Lola Williams, University Hospital, Omaha; Florence Keegan, St. Elizabeth Hospital, Lincoln; Clara Schlecht, Bryan Memorial Hospital, Lincoln; Charlotte Nalley, Lincoln General Hospital, Lincoln; Emily Brickley, State Health Department, Lincoln.

Other persons assisting with the instruction will be E. A. Rogers, M.D., Director of Tuberculosis Control Division, State Department of Health; William S. Dunn, Chemist, State Laboratory; Dr. Janet Palmer, Psychiatrist, State Department of Health.

Topics to be discussed include: "Nuclear Physics," "Environmental Sanitation," "Medical Aspects of Atomic Warfare," Psychological Aspects of Atomic Warfare," Nursing Care of Disaster Victims," "The Role of the Nurse in the Defense Program."

A school and school bus testing program for excessive concentrations of carbon monoxide gas is being conducted by the Division of Industrial Hygiene, Nebraska State Department of Health.

Ten carbon monoxide testing kits were purchased early this winter and have been in circulation throughout the state since their receipt.

The division received solicited requests for service from 142 cities and 9 counties, which represents a total testing potential of 291 schools and 268 school buses.

To date, the division has received 14 school and 77 school bus reports and of this number 2 school buses showed a harmful concentration of this dangerous gas. The conditions which presented the excessive exposures have been remedied and thus the possibility of 50 to 57 children being overcome by this dangerous gas has been eliminated.

The Nebraska State Plan for Hospital Construction, Second Revision, was approved by the Surgeon General of the U. S. Public Health Service on February 15, 1951. Copies will be available for distribution to interested persons upon request to the Nebraska State Department of Health.

TECHNICAL EXHIBITS

at the Annual Session in Omaha

Booth No. 1—**Philip Morris & Co.,** 119 Fifth Avenue, New York, N. Y. Philip Morris & Co., will show the results of research on irritant effects of cigarette smoke. These results show conclusively that Philip Morris are mild and non-irritating. An interesting demonstration will be made on smokers at the exhibit which will show the difference in cigarettes.

Booth No. 2—**Seiler Surgical Co.,** 111 So. 17th Street, Omaha, Nebraska. Best wishes to all who have made this meeting possible. To those and all members we wish all happiness and prosperity. We invite you to visit our display.

Booth No. 3—**Gray Fox, Inc.,** 406 Westport Road, Kansas City, Mo. We invite you to visit the Gray Fox booth where the Gray Fox family, Ciritex, Cirijel, Ciricreme and Ciritine will be displayed. Our representatives will be happy to point out the merits of each item.

Booth No. 4—**Sandoz Chemical Works,** New York, N. Y. It is with a great deal of pleasure and pride that we invite you to visit our scientific exhibit at the forthcoming convention April 30 to May 3rd, 1951. Our booth number is four.

Booth No. 5—**Picker X-Ray Corp.,** 611 Nebraska Street, Sioux City, Iowa. Picker X-Ray will exhibit the Picker Meteor, a combination fluoroscopic and radiographic x-ray unit which occupies approximately the same space as a conventional office examining table. Picker X-Ray will also exhibit the Birtcher Crystal controlled, A.M.A. and F.C.C. approved short way diathermy as well as the A.M.A. approved Edin Direct Writing Electrocardiograph.

Booth No. 6—**Abbott Laboratories,** Chicago, Ill. Abbott will exhibit Abbocillin-DC, 600,000 units of penicillin in a 1-cc. cartridge: Aerohalor, a simplied device for the inhalation of finely powdered medicament; Dayalets and Optilets, multiple vitamin tablets with vitamin B12 and synthetic Vitamin A; Sulestrex Piperazine, an odorless and practically tasteless form of estrone for oral administration: Sucaryl, a synthetic, heat-stable, non-caloric sweetening agent, and Truozine Dulcet Tablets, candylike medication containing sulfadiazine, sulfamerazine and sulfamethazine.

Booth No. 7—**The Audograph Company of the Northwest,** 541 North Broadway, Milwaukee, Wisconsin. More and more the doctor is coming to the realization that he must take advantage of the many valuable aids afforded by the present day world. The Audograph Electronic Soundwriter is one of these and is an outstanding dictating machine. A unique method of disc drive has resulted in the maximum performance along with the lowest initial cost, operating cost and service cost.

Booth No. 8—**Winthrop-Stearns, Inc.,** 170 Varick Street, New York, N. Y. Winthrop-Stearns, Inc., invite you to visit its booth, where the following products will be featured: Thanfadil, a new and better antihistaminic which is exceptionally effective in bronchial asthma (82%) as well as other common allergic disorders; Levophed, the true vasoconstrictor hormone of the adrenal medulla, for the maintenance of blood pressure in shock and other acute hypotensive states.

Booth No. 9—**Ortho Pharmaceutical Corporation,** Raritan, New Jersey. Ortho cordially invites you to visit its booth. Featured will be the Ortho Kit, a new, convenient and complete kit containing the requisites for conception control in a beautiful woven plastic zippered purse. New products displayed will be Diffusion (hyaluronidase), Masse' Nipple Cream, and other new gynecic pharmaceuticals.

Booth No. 10—**M & R Dietetic Laboratories,** Columbus, Ohio. Our representatives will appreciate the opportunity to discuss with you the merits and uses of our products in the field of infant and child nutrition.

Booth No. 11—**The Doho Chemical Corporation,** 100 Varick Street, New York, N. Y. The Doho Chemical Corporation and its subsidiary, Mallon Chemical Corporation, makers of Auralgan, O-Tos-Mo-San and Rectalgan, are proud to announce their new nasal decongestant, Rhinalgan—a balanced formulation of two active chemical compounds that gives prolonged vasconstriction—used as a spray, in our patented Dohony Spray-O-Mizer. It is pleasant tasting, with no systemic effect, and can be safely used for infants and children. Our representatives will be happy to explain the merits of Rhinalgan and distribute samples of this inovation.

Booths No. 12 and 13—**Coca-Cola Company,** Atlanta, Georgia. Ice cold Coca-Cola will be served through the cooperation and courtesy of the Omaha Coca-Cola Bottling Company and The Coca-Cola Company.

Booth No. 14—**A. H. Robins Company,** Richmond, Virginia. The A. H. Robins Company display is featuring the sedative-antispasmodic, Donnatal; the antirheumatic, Pabalate; Entozyme, digestant with the unique "peptomatic" action; Allbee with C, high potency "B" complex capsule with ascorbic acid; and Phenaphen with Codeine, our new analgesic. Robins' medical service representatives will welcome the privilege of discussing with physicians attending the session these and other products in the company's line of prescription specialties.

Booth No. 15—**Harold Diers & Co.,** Omaha, Nebr. Our agents will be glad to tell you about the advantages of insurance protection guaranteed by our company. Be sure to visit our booth.

Booth No. 16—**G. D. Searle & Company,** Chicago, Illinois. You are cordially invited to visit the Searle booth where our representatives will be happy to answer any questions regarding Searle Products of Research. Featured will be Banthine, the true anticholingeric drug for the treatment of peptic ulcers; Dramamine, for the prevention and active treatment of motion sickness; and Alidase, Searle brand of hyaluronidase which permits subcutaneous feedings at intravenous speed. Other time proven products of Searle Research on which information may be obtained are Searle Aminophyllin in all dosage forms, Metamucil, Ketochol, Floraquin, Kiophyllin, Dicdquin, Pavatrine, and Pavatrine with Phenobarbital.

Booth No. 17—**Phebus Surgical Co.,** 1727 Howard Street, Omaha, Nebr. Phebus Surgical is again exhibiting at the Annual Session. We are looking forward to seeing many of you at our booth. Our representative will be on hand to greet you.

Booth No. 18—**Lanteen Medical Laboratories, Inc.,** 2020 Greenwood Street, Evanston, Illinois. We cordially invite you to visit our booth. Our representatives will be happy to discuss the latest technique in diaphragm fitting embodying the Lanteen Diaphragm as well as any of the other well known Lanteen products.

Booth No. 19—**Medco Products Company,** 3603 E. Admiral Place, Tulsa, Oklahoma. Your meeting is one of more than 60 state, sectional and national meetings where more than 90,000 physicians in 1951 will have an opportunity to see the very interesting Medcotronic low volt generator. Make it a point to visit our booth where our representative will be glad to demonstrate the Council accepted Medcotronic.

Booth No. 20—**The Dairy Council,** WOW Building, Omaha, Nebr. Visit the Dairy Council booth for a good, cold glass of milk. Free health education materials will be on display. Whether you are in private practice, in clinic work, or teaching, there will be materials of interest. Plan now to see the literature and enjoy a delicious glass of milk at the Dairy Council booth!

Booth No. 21—**The Smith-Dorsey Company,** 233 South 10th Street, Lincoln, Nebraska. We cordially invite you to make our booth your headquarters where several new releases will be featured: (1) Sanbromal—for treatment of Premenstrual tension and water retention of "Pitressin" origin. (2)—Neutrophylline—a buffered Aminophyllin suppository. (3)—Pabirin—an improved product for Salicylate therapy. (4) Also featured are many new injectable preparations.

Booth No. 22—**Croshy Surgical Company,** 111 North 18th Street, Omaha, Nebraska. We extend a welcome to our friends and valued customers.

Booth No. 23—**Schering Corporation,** 2 Broad Street, Bloomfield, New Jersey. Gynetone, Schering's combination of estradiol and testosterone, available in oral and parenteral forms, will be displayed at the booth, together with Methostan, Schering's brand of Methandriol, methylandrostenediol. Trimeton lotion and Trimeton Maleate Cream, two outstanding antihistamine preparations for topical application will also be featured at the Schering booth along with Chlor-Trimeton tablets and Chlor-Trimeton Maleate Syrup.

Booth No. 24—**The Medical Protective Company,** Fort Wayne, Indiana. The Medical Protective Company invites you to visit its booth. The company's representatives are thoroughly trained in professional liability underwriting and will be glad to explain how this company meets the exacting requirements of adequate liability protection, which are peculiar to the professional liability field.

Booth No. 25—**Physicians and Hospitals Supply Co.,** 400 South 6th Street, Minneapolis, Minnesota. The Physicians & Hospitals Supply Co., will show a complete line of up to date medical equipment and supplies, including such items as the Beck-Lee Cardiall, short wave diathermy apparatus, the medcotronic stimulator and many other items. We invite you to inspect the equipment that we have on display.

Booth No. 26—**Ulmer Pharmacal Company**, Minneapolis, Minnesota. Ulmer Pharmacal Company supplies an extensive line of ethical pharmaceutical specialties including Ulvical, Panasal, Pheneen, Cal-Zo ointment, Andoin ointment, Ul-Tar ointment, Hematovals, Tokols, and Co-Lu-Gel. We also supply injectable solutions in multiple dose vials, vitamin products, general pharmaceutical products, and a complete listing of stain and reagent solutions. Be sure to visit our display.

Booth No. 27—**W. B. Saunders Company**, West Washington Square, Philadelphia, Pennsylvania. We invite all doctors to visit our exhibit where Mr. Lynden L. Morris will display a complete line of our books including Hyman's "Intergrated Practice of Medicine," Hyman's (new) "Progressive Volume," Conn's "1951 Current Therapy," Anson's "Atlas of Human Anatomy," Sodeman's "Pathologic Physiology," Sweet's "Thoracic Surgery," Curtis-Huffman's "Textbook of Gynecology," Shank's "Textbook of X-ray Diagnosis," American College of Surgeon's "Surgical Forum," Major's (new 4th edition) "Physical Diagnosis," and many other new books and new editions.

Booth No. 28—**Eli Lilly and Company**, Indianapolis, Indiana. Your Lilly medical service representative cordially invites you to visit the Lilly exhibit. Many new therapeutic developments will be featured and literature on these products will be available. Visiting physicians will be aided in every possible way.

Booth No. 29—**G. E. X-Ray Corporation**, Milwaukee, Wisconsin. Our booth will be staffed by representatives who will be able to thoroughly explain the recent developments made by G. E. X-Ray Corporation. You are cordially invited to visit our exhibit.

Booth No. 30—**E. R. Squibb & Sons**, 745 Fifth Avenue, New York, N. Y. We look forward to seeing you at the Annual Session. In support of the active scientific program which has been arranged, you will find the Squibb representative glad to discuss all relative products. Also, for your convenience, selected professional literature will be available which you may take or request us to mail to your home.

Booth No. 31—**A. S. Aloe Company**, 1831 Olive Street, St. Louis, Missouri. Visit our booth where the Aloe representative will show you a cross section of the complete stock of physicians equipment and supplies carried by the Aloe Company. Highlighted will be new model Steeline—Tomorrow's Treatment Room Furniture Today. It features the body contour table top, magnetic door catches and advanced design, all in new decorator's colors.

Booth No. 32—**Lederle Laboratories**, 30 Rockefeller Plaza, New York, N. Y. You are cordially invited to visit our exhibit, where you will find representatives who are prepared to give you the latest information on Lederle products.

Booth No. 33—**Mead Johnson and Company**, Evanston, Indiana. Mead Johnson will feature Lactum and Dalactum, convenient formulas of evaporated milk containing Dextri-Maltose; three water-soluble vitamin preparations, Poly-Vi-Sol, Tri-Vi-Sol and Ce-Vi-Sol; Fer-In-Sol, a palatable, highly concentrated solution of ferrous sulfate, and Poly-Vi-Caps, multiple vitamin capsules for older children. Representatives in attendance will be glad to furnish information regarding the above products.

Booth No. 34—**Ciba Pharmaceutical Products, Inc.**, 556 Morris Avenue, Summit, N. J. Ciba Pharmaceutical Products, Inc., invites you to visit its exhibit which will feature Priscoline Hydrocholoride, and adrenolytic an sympathicolytic agent that produces peripheral vasodilation. Representatives in attendance will gladly discuss the role of Priscoline in the treatment of peripheral vascular disease.

Booths No. 35 - 40—**Donley-Stahl Co.**, Lincoln, Nebr. We will display the latest medical equipment with qualified representatives on hand to give you technical information.

Booth X—**Blue Cross-Blue Shield**, 518 Kilpatrick Building, Omaha, Nebraska. You are cordially invited to visit our exhibit and to secure information about Nebraska's non-profit plans for hospital-medical care. Blue Shield Manuals, Medical Report forms and plaques will be available.

The Science of Health—2nd Edition, by Florence L. Meredith, B.Sc., M.D., Fellow of the American Medical, American Public Health and American Psychiatric Associations. 48 tables and charts; 134 illustrations; 452 pages. $3.75. The Blakiston Company, Philadelphia.

A new edition of a well-known text for a college health hygiene course brought completely up-to-date with many simplified and diagrammatic illustrations and new material on contemporary subjects. The text's readable and interesting style gives the student a clear picture of the fundamentals of personal, physical and mental health, and helps him to understand the health problems of the country today.

Know Your Blue Shield Plan

Blue Shield invites all physicians attending the Annual Sessions of the Nebraska State Medical Association in Omaha, April 31 through May 3, to visit the Blue Cross-Blue Shield exhibit booth. Information, literature and Blue Shield supplies will be available.

Prompt reporting of Blue Shield services means prompt payment to physicians. Reports of surgical and obstetrical cases in particular should be sent in as soon as possible after services are rendered.

Many Nebraska physicians gave their approval to the double postcards offered to them by Blue Cross-Blue Shield some weeks ago. More than 33,000 cards have been supplied to the physicians who requested them for enclosure with their statements to patients. Postcards are still available, and will be supplied without charge to physicians requesting them.

Reminder: Anyone under age 65 may make application for Blue Cross-Blue Shield membership during April. A special Non-Group enrollment campaign is being conducted this month to permit anyone under 65 years of age, regardless of employment status, to enroll. The regular Non-Group enrollment requirements will again go into effect after April 30.

Standard nomenclature, as shown in the Schedule of Benefits, should always be used when filling out the medical report for Blue Shield services. This is important for these reasons:

1. It will expedite the processing of cases.

2. It will enable the Medical Director to determine the correct allowance for procedures.

3. It will enable Blue Shield to maintain accurate statistical and actuarial records.

A good percentage of county medical societies were presented at the Conference of Blue Shield Liaison Committees in North Platte on March 15. Chairman for the meeting was Dr. Donald J. Wilson, Chairman of the Prepayment Medical Care Committee of the Nebraska State Medical Association. Among the speakers were Dr. Charles H. Sheets, President of the Nebraska State Medical Association, Mr. John W. Castellucci, Assistant Director of the Blue Shield Commission, and Mr. J. H. Pfeiffer, Executive Director of the Nebraska Blue Cross-Blue Shield Plans. Mr. M. C. Smith, Executive Secretary of the Nebraska State Medical Association, was moderator for the panel discussion.

NEBRASKA MEDICAL SERVICE
CASE REPORT—FEBRUARY, 1951

Numher of Services Rendered	3,308
Females	1,976
Males	1,332
Subscribers	1,236
Dependents	2,072

ENROLLMET SUMMARY, FEBRUARY, 1951

	Subscribers	Dependents	Participants
Groups enrolled during February			50
Groups cancelled during February			13
Number of active groups, March 1, 1951			3,008
Membership, February 1, 1951	62,290	86,583	148,873
Additions	1,490		
Less Terminations	1,070		
Net Gain	420		
Membership, March 1, 1951	62,710	87,167	149,877

BALANCE SHEET

February 28, 1951

Assets:		
Cash in Banks	$171,427.56	
Premiums in Process of Collection	20,883.00	
U. S. Bonds	384,950.50	
Accrued Interest on U. S. Bonds	3,618.53	
Total Assets		$580,879.59
Liabilities, Reserves and Surplus:		
Accounts Payable, Blue Cross	$ 11,933.62	
Accounts Payable, Monthly Invoice	291.80	
Accrued Payroll Taxes	162.60	
Claims Reported But Unpaid (Pending)	13,579.00	
Unearned Premiums	119,887.55	
Total Liabilities		$145,854.47
Reserves for:		
Unreported Claims	$117,263.62	
Maternity Care	154,301.85	
Bonuses	600.00	
Collection Losses	1,500.00	
Total Reserves		$273,665.47
UNASSIGNED SURPLUS		$161,359.55
Total Liabilities, Reserves, Surplus		$580,879.59

STATEMENT OF INCOME AND EXPENSE

February 28, 1951

Income:	February	2 Months to Date
Dues	$147,127.11	$289,147.61
Enrollment Fees	1,357.00	2,508.00
Total Earned Income	$148,484.11	$291,655.61
Claim Expense:		
Claims Paid	$104,941.50	$223,497.50
Less:		
Unreported, 1-31-51	122,502.12	128,517.12
Pending, 1-31-51	7,464.00	1,944.00
Plus:		
Unreported, 2-28-51	117,263.62	117,263.62
Pending, 2-28-51	13,579.00	13,579.00
Claims Incurred	$105,818.00	$223,879.00
Administrative Expense:		
Collection Expense	$ 6.50	$ 193.53
Professional—Medical	250.00	500.00
Advertising—B. S. Only	96.60	128.60
Printing	178.00	2,734.75
Office Supplies	23.25	23.25
Postage	------	134.00
Dues	156.32	300.74
Taxes and Licenses	427.81	427.81
Payroll Taxes	6.25	12.50
Payment to B. C.—		
Regular	11,193.87	22,782.76
Advertising	739.75	1,102.55
Bonus Expense	300.00	600.00
Conferences and Meetings	40.80	196.10
Salary—Secretary	416.67	833.34
Miscellaneous	12.00	24.00
Total Administrative Expense	$ 13,847.82	$ 29,993.93
Gain from Underwriting	$ 28,818.29	$ 37,782.68
Miscellaneous Gain or Loss Items:		
Plus—Miscellaneous Income	$ 460.25	$ 460.25
Less—Increase in Maternity Reserve	1,859.85	210.15
	—$ 1,399.60	$ 250.10
Gain or Loss to Surplus	$ 27,418.69	$ 38,032.78
Surplus, 1-31-51 and 12-31-50	$133,940.86	$123,326.77
Surplus, 2-28-51	$161,359.55	$161,359.55

SURVEY REVEALS INCREASE OF CANCER IN ST. LOUIS

A survey of over 12,000 autopsy reports by three St. Louis physicians revealed a slight increase in the incidence of cancer in St. Louis during a 15-year period and also pointed out the 10 most commonly afflicted parts of the body.

Drs. John A. Saxton, Fred P. Handler and John Bauer, of the Washington University School of Medicine, St. Louis, made a report of their study in the December Archives of Pathology, published by the American Medical Association.

The survey involved the study of autopsy records of 12,443 persons who died in St. Louis municipal and state hospitals during a 15-year period from July 4, 1935, to July 4, 1950.

The purpose of the study, according to the authors, was to determine the incidence of cancer in relation to age and to observe any changes in incidence within the 15-year period. The age distribution of the cases surveyed closely paralleled that of the total reported mortality of the community. About 9 per cent of deaths in the community were included in the survey.

A total of 2,322 or 18.7 per cent of the reports examined, regardless of age, showed the patients bore cancers. The incidence of cancer increased from 16.8 per cent in the first five-year period from 1935 to 1940, to 20.6 percent in the last five-year period from 1945 to 1950. The doctors said "the increase could not entirely be accounted for by an observed shift in the distribution of cases toward a more advanced age."

The most common types of cancers, in order of frequency, revealed by the survey, involved the following organs: large intestine (including rectum), lung, stomach, prostate, cervix, breast, urinary bladder, throat, pancreas and brain. Increases in actual frequency over the 15-year period were noted in the case of carcinomas of the lung, the prostate and the pancreas. Cancers of the urinary bladder and throat decreased. The most conspicuous increase occurred in cancers of the lung.

The report also revealed the incidence of all types of cancer increased with advancing age into the seventh decade of all types of cancer increased with advancing age into the seventh decade of life. With the exception of elderly males, in whom the incidence of cancer of the prostate continued to increase, there was a decrease in incidence beyond this age. The doctors concluded that the incidence of total malignant tumors does not increase indefinitely as a function of age.

DOCTORS GET 'RAW DEAL' AT INCOME TAX-PAYING TIME

With the income deadline just passed, you can take it from an economist that the average physician gets a "raw deal" on his income tax rate.

And, in the words of Frank G. Dickinson, director of the Bureau of Medical Economic Research of the American Medical Association, here is why:

"Most of us employed by companies are covered by pension or profit-sharing plans chalked up to 'operating expenses.' We are not taxed for these extra earnings until we receive them. By then, most of us are retired and our tax burdens are reduced because we are in the lower income tax brackets. Among physicians and other professional workers, only those employed by companies are eligible for such pensions. Most professional persons are self-employed; they cannot charge off a pension to business expenses.

"The physician has the longest training period among professional people, starting to earn around age 28. During his nine or more years of training, his lost income and expenses amount to about $35,000. Accordingly, he must earn $5,000 extra each year in order to catch up to the person who went to work at 18. His lifetime earnings are bunched into relatively few peak-earning years. During these years he is in a higher income bracket.

"Over a lifetime, then, he pays more taxes than a man who earns the same amount over a longer period, and he cannot finance any part of a pension out of tax-free business expenses."

Human Interest Tales

Communications bearing human appeal are solicited. They should be addressed to The Editor, Nebraska State Medical Journal, 111 So. 39th, Omaha.

Dr. Walter P. Ulmer of Dawson has opened an office in Humboldt.

Dr. John E. Downing left Omaha in January to practice radiology in Yakima, Wash.

Dr. G. H. Morris was recently elected as the man of the year in Garden County, Nebraska.

Dr. F. G. Travnicek of Wilber suffered minor injuries in an auto accident early in March.

Dr. Harold C. Lueth addressed the Fremont Kiwanis club on the use of ACTH in February.

It is reported that Doctors O. L. Seng and John Broz of Alliance have dissolved their partnership.

Dr. John Harger addressed the meeting of the Womans Club at Columbus the latter part of February.

Dr. Sam Perry formerly of Gothenburg is on duty with the U. S. Marines. He is station in San Diego, Calif.

Dr. E. H. Reeves of Broken Bow is on active duty with the U. S. Air Force. He is stationed in Bermuda.

Dr. James E. Ramsay, formerly associated with Dr. C. L. Marsh of Valley, has moved to Stuart, Nebraska.

The condolences of the Journal go to Dr. Charles McMartin of Omaha on the recent death of his wife and to Dr. Kenneth F. McDermott of Grand Island on the death of his father.

Dr. Harry W. Francis of Bancroft received honorable mention in the Lyons Mirror-Sun recently as having practiced in this community over 50 years. Dr. Francis is 84 years old.

Associated with Dr. R. P. Carroll of Laurel is Dr. James F. Embick. Dr. Carroll, according to press reports, has enlisted in the U. S. Army Medical Corps and is stationed at Rapid City, S. D. Dr. Embick has had active duty in the U. S. Naval Reserve Medical Corps for 4½ years.

SEVENTH RURAL HEALTH CONFERENCE TO BE HELD IN DENVER IN 1952

Denver has been selected for the seventh annual National Conference on Rural Health, according to Dr. F. S. Crockett of Lafayette, Ind., chairman of the A.M.A. Committee on Rural Health.

The meeting will be held in the Shirley-Savoy Hotel, Febr. 28, 29 and March 1, 1952, and will be sponsored by the committee in cooperation with leading farm organizations. The sixth annual meeting, held in Memphis, Tenn., recently was attended by more than 600 medical, farm and agricultural extension leaders from all parts of the country.

Out of these conferences, Dr. Crockett pointed out, have developed programs for health improvement in small communities.

ACTH LESSENS HEART DAMAGE DURING RHEUMATIC FEVER

The belief that the early use of ACTH in the treatment of acute carditis due to rheumatic fever will lessen the degree of damage to the heart was voiced today by two New York pediatricians.

The effects of ACTH on eleven patients, 6 to 18 years of age, were studied by Drs. May G. Wilson and Helen N. Helper at New York Hospital, Cornell University Medical Center. Six of their patients were presumably in their initial attack of rheumatic fever and in five it was current. Their findings were reported in the January 20 Journal of the American Medical Association.

"In every patient evidence was obtained which indicated that symptoms and signs of progressive acute carditis were terminated during ACTH therapy by the third to seventh day," they reported, adding that in rheumatic fever the degree of damage usually parallels the severity and duration of acute carditis.

"From this limited experience it would appear that the early treatment of acute carditis with adequate amounts of pituitary adrenocorticotropic hormone (ACTH) should shorten the course, result in minimal residual cardiac damage and prevent death due to progressive carditis and resultant congestive failure," they said.

The signs which the pediatricians interpreted as pointing to the reversibility of the acute rheumatic process during treatment with ACTH were: diminished enlargement of heart chambers, disappearance of murmurs denoting weakness of heart valves, electrocardiographic tracings showing disappearance of disturbance to the muscular walls of the heart and the increase in heart reserve.

The patients were reported to be ambulatory two to four weeks after treatment was begun and the symptoms and signs of active carditis in eight patients did not recur when treatment was discontinued.

"Some degree of cardiac damage was possibly sustained in all patients who received ACTH," the doctors said, but the patients were observed from four to 12 months after treatment and there was "no further evidence of increased cardiac damage" in five patients. In the six patients who were treated during what was presumed their first attack, there was no evidence of cardiac damage in two and equivocal evidence in three. No mention was made of the sixth patient.

No significant side effects attributable to ACTH were noted during its administration to patients for four to seven days or during a second course of treatment.

CANDY-LIKE RAT POISONS ARE THREAT TO CHILDREN

Rat poisons disguised as candy-like substances, especially those containing thallium, are a real threat to children, according to an article in the American Journal of Diseases of Children, published by the American Medical Association.

Thallium, a poisonous metal, is especially effective as a rodenticide because it is odorless and tasteless and easily transformed into highly palatable concoctions.

(Continued on page xxvi)

The Nebraska State Medical Journal

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

Vol. 36 Norfolk, Nebraska, May, 1951 No. 5

EDITORIAL

A BEGINNING HAS BEEN MADE

We note with satisfaction that the Nebraska State Medical Association and the Alumni Association of the University of Nebraska College of Medicine have combined their efforts in pleading with the Unicameral Legislature for a medical school budget to allow for necessary improvements long past due. It is particularly encouraging to read that these groups concious of the disadvantages of the current system of budgeting through the University's general fund, are asking for specific allotments for the medical college to meet immediate needs. Press comments indicate that such allotments are not favored by the Board of Regents and University officials. Though the reason for this attitude is understandable we are not impressed with its logic unless we accept the status quo and run the risk of having the college lose its rating.

During a recent hearing of the Budget Committee of the Legislature it was shown that in the past twenty-five years the only new construction on the Omaha campus was a service building. In spite of badly needed repairs of the present buildings, additional classroom space for undergraduate teaching, the Board of Regents has requested a medical college budget of 1,300,000 for the coming year. Conservative estimates place the minimum need at 5,875,000 for the next biennium.

It remains to be seen, of course, what the disposition of the legislators will be. The people of Nebraska, we feel, are willing to support a good medical college. The legislators, too, know that institutions of high rank are an asset to the state. Yet for their part, the legislators feel that they must act in harmony with the people's **demands** for such institutions.

The corollary is simple. We must maintain a vigorous campaign for a greater public interest in our Medical College than now prevails. The Nebraska State Medical Association we hope will continue its efforts to the point at which the College can regain its place among the best in the country.

THE WEST CENTRAL DIABETES ASSOCIATION

On page 183 is a communication from Dr. Floyd Rogers announcing the opening of the Camp for Diabetic children. It would be superfluous for the Journal to urge support of this important project. We are certain the physicians of Nebraska will welcome the camp as one of the most important aids to their care of the diabetic child.

We have the utmost respect and admiration for the Diabetes Association. For here is a comparatively small group of practicing physicians organized for the purpose of ameliorating the problem of diabetes and to extend direct help to the patient suffering from this disease. They go about their task quietly without fanfare and without emphasis on fund-raising. Last fall without asking for a dime this small group put over a successful urine-testing campaign which uncovered over three hundred cases of diabetes or potential diabetes, thus saving that many Nebraskans (we hope) from the threat and inconvenience of the severe and incapacitating forms of the disease as a result of early discovery (and again we hope) timely care.

Wherein lies the secret to such accomplishment? We let the reader make his own deductions.

The Camp may be assured of acceptance not only by the medical profession, but with equal enthusiasm by the people of Nebraska.

To those responsible for the leadership of the West Central Diabetes Association:

Our congratulations and best wishes.

ROY W. FOUTS, M.D.

After a lingering period of suffering from metastatic carcinoma Dr. Roy W. Fouts died March 27, 1951.

Few physicians have had the privilege of leaving behind them a record of service and achievement similar to that left by Roy Fouts. A champion for the best in organized medicine he was fearless in fighting for what he considered right. Where the good of the medical profession was concerned he recognized no compromises. Vigorous and methodical, he was an excellent organizer. Time, personal convenience, and effort had no meaning to him where the accomplishment of a task was involved. Driving to or from Lincoln was never too hazardous when a healing arts bill was scheduled for hearing, or when there was a committee meeting to attend.

One of the most active opponents to socialized medicine from his earliest professional days, Dr. Fouts never ceased to deplore the present federal bureaucracy alligned against the practicing physician. Only his most intimate friends knew the physical hardships he endured going from one luncheon club to another, addressing countless business, professional and labor groups on the evils of socialized medicine, always aware of his impending call! Only three days before his death, in a voice weak from exhaustion, pain and sedation, he expressed the hope that organized medicine remain strong enough to withstand the pressures of ambitious reformers and self-appointed do-gooders.

His whole life was centered around organized medicine. And a full professional life it was, and his career in every sense a success. He was honored with every office that could be bestowed on him locally and nationally. When in 1948 he resigned as Speaker of the House of Delegates, the presidency of the American Medical Association could have been his for the asking. Unfortunately he felt too ill to accept this highest office in the Association. He was elected vice president. In Nebraska he was for many years one of the most prominent leaders in the Association, the foremost authority on problems of forensic medicine and medical legislation.

It is not easy to write adieu on a colleague who played such an important role in the life and progress of our Association. It is with a feeling of painful nostalgia that we say:

We will miss you, Roy.

SPONGE BIOPSY VALUABLE IN DISCOVERING EARLY CANCERS

Sponge biopsy has proved valuable in discovering cancers of the cervix, rectum, mouth and skin.

It is described by Sidney Gladstone in the April 21 Journal of the American Medical Association. Dr. Gladstone is associated with the New York Polyclinic Medical School and Hospital.

The procedure, according to the article, is fairly simple. A gelatin or cellulose sponge is rubbed on a suspected lesion. By rubbing, small particles of tissue are picked up by the sponge. These particles are then examined by a pathologist for possible cancer cells.

Gladstone has found the method very effective. Thus:

"For the detection of early cervical carcinoma, the method of sponge biopsy was found to be very reliable and distinctly superior to the method of surgical biopsy as usually performed. Because of the absence of distinctive visible changes, it is not surprising to learn that a single small block of tissue removed by surgical biopsy from the most favorable site will miss half these lesions."

Gladstone has done over 1,200 sponge biopsies in two years.

In a series of 641 women examined for cancer of the cervix uteri, he found 16 cancers. Nine of these were suspected because of ulceration, bleeding or both. Seven cancers were early, however, showing no symptoms.

Sponge biopsies on 32 patients with ulcerating lesions of the rectum showed cancers in 15.

"These findings," Gladstone writes, "were all confirmed by surgical biopsy, surgical specimen or operative findings. In two cases with correct diagnosis of cancer by sponge biopsy, the surgical biopsy specimen had failed to include cancerous tissue and was falsely interpreted as negative. In our experience, sponge biopsy has succeeded in collecting diagnosable cancerous tissue in all cases of cancer of the cervix and rectum."

Gladstone further reports 40 sponge biopsies on ulcerating lesions of the mouth, revealing 12 cancers, and 22 sponge biopsies of the skin, indicating 11 cancers—all confirmed by surgical biopsy.

Because of its availability, the method of sponge biopsy offers the general practitioner an opportunity to play the principal part in the detection and diagnosis of several important types of early curable cancer.

RECORD MEETING OF A.M.A. INDICATED BY REGISTRATIONS

The 100th annual meeting of the American Medical Association to be held in Atlantic City June 11-15 promises to surpass other meetings in interest and attendance. The record registration was established in 1947 when the centennial celebration of the A.M.A. attracted approximately 16,000 doctors to a meeting at Atlantic City.

"Already the advance registration is greater than in any previous year," according to Dr. George F. Lull of Chicago, secretary and general manager.

Every phase of medicine will be discussed in more than 400 papers to be presented by leading physicians from all over the country. The scientific exhibit will be the largest ever, totaling 290 displays. Special attention has been given to exhibits of interest to the doctor in general practice.

Case Report of a True Non-Parasitic Cyst of Spleen

ROY H. WHITHAM, M.D.; ROBERT O. GARLINGHOUSE, M.D.; FRANK H. TANNER, M.D., and SAMUEL F. MOESSNER, M.D.
Lincoln, Nebraska

True non-parasitic cysts of the spleen are extremely rare. Indeed, cysts of all varieties of the spleen are not common. Martin, Zega and Adamson(8) state that cysts of the spleen are the least frequently encountered cystic disease involving abdominal viscera. Deneen(3) refers to the records of the Bellevue Hospital, from 1904 to 1940 in which eight cases of cyst of the spleen were encountered, but during this same period of time 48 cysts of the liver were found. Text books of surgery deal very meagerly with this subject, dismissing the problem with a few sentences. Andral(1) in France supposedly was the first to report a splenic cyst in 1829. Fowler(4) was interested in the incidence and etiology of these cystic masses and by 1939 collected a total of 137 reported cases. McClure and Altmeier(9) collected an additional 11 such splenic cysts from the literature up to February 1, 1941, and reported a case of their own. Harmer and Chalmers(7) reviewing the literature in 1944 had brought the incidence of reported cases to 162. Martin, Zega and Adamson(8) collected 21 cases by May 1950 and reported an additional case of their own, thus bringing the total to 184 cases. This number included both false and true lienal cysts.

True cysts are distinguished from the more frequently occurring false cysts by the presence of a secreting epithelial or endothelial lining. McClure and Altemeier(9) in 1942 noticing the inadequacy of the usual classification of cysts into single or multiple, unilocular or multilocular, parasitic or non-parasitic, true or false, devised the following classification:

I. True Cysts (lined by specific secreting membrane).
  A. Epithelial
    1. Dermoid
    2. Epidermoid
  B. Endothelial
    1. Lymphangioma
    2. Hemangioma
    3. Polycystic disease
    4. Some serous cysts
  C. Parasitic (lined by protoplasmic matrix containing numerous nuclei).
    1. Hydated cyst (caused by echinococcus)
II. False cysts (no specific secreting lining).
  A. Hemorrhagic
  B. Serous
  C. Inflammatory
    1. Acute necrosis from infection
    2. Chronic tuberculosis
  D. Degenerating liquefaction of infarcted areas caused by embolism or arterial thrombosis.

The etiology of non-parasitic cysts of the spleen remains unknown. Recent experimental work by Martin, Zega and Adamson(8) on dogs has failed to shed light on this problem. McClure and Altemeier(9) point out that there are more cysts found in women than in men; also that the women were most frequently in their child bearing age, that is between 20 and 50 years of age. Cysts have been noted in newborn infants. Trauma is considered to play an important role in the formation of large hemorrhagic or serous types. These authors conclude that trauma caused bleeding into the spleen without causing laceration of the capsule. They believe that spontaneous intrasplenic hemorrhage may also occur with trauma and thus subsequently lead to a cyst. Deneen(3) calls attention to the possible role of infarcted areas from arterial degeneration, or occlusion of blood vessels by emboli with consequent necrosis or splenic pulp. He reported five cases of splenic cyst in which he felt infarction was the cause. The false serous type of cyst is explained on the basis of incomplete absorption of the blood.

Trauma, however, cannot adequately explain the etiology of true cysts. The latter group is thought by Denneen(3) to be infoliation cysts, that is inclusions of peritoneum, which again may result from trauma or possibly inflammation. There may be single or multiple cysts thus formed and these may be superficial or deep. These infoliation cysts are distinguished from what is described as dilatation cysts or polycystic disease of the spleen and lymphangiomata, hemangiomata or neoplastic types. Pepere(10) proposes that true cysts may develop from cellular rests formed under the splenic capsule as a result of abnormal invagination of the perisplenium during fetal development. There is some difference of opinion in the literature concerning the possibility of hematomata developing a true cell lining. There is no experimental work to clarify this point. The observation that non-parasitic cysts of the spleen are found mostly in women in the child bearing age is not satisfactorily explained. De Lee(2) suggests that the cyclical hormone changes occurring during menstruation and pregnancy alter the size and congestion of the spleen and that trauma during the phase of enlargement and congestion may be sufficient to induce hematoma or cystic changes.

Fowler's(5) investigation indicated that echinococcal cysts occur about twice as frequently as all of the non-parasitic forms.

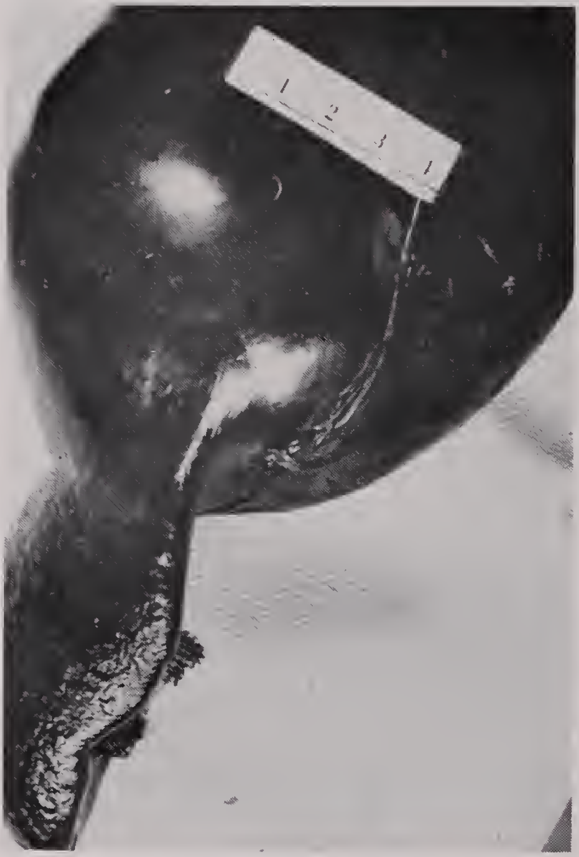

Fig. 1. Gross photograph showing spleen with cyst before opening. Note thin rim of splenic substance completely surrounding cyst.

Echinococci are the only important parasites that produce splenic cysts. False cysts he encountered about four times as often as the true type. Eighty per cent of the false cysts were large, solitary and unilocular; two-thirds were of the hemorrhagic variety, and one-third were of the serous type.

No distinguishing symptomatology characterizes splenic cysts. Small cysts usually give no symptoms and large cysts produce pressure symptoms and pain in the left hypochondrium. Martin, Zega and Adamson(8) point out that heaviness in the left hypochondrium and also digestive disturbances have been observed. Large cysts may be easily distinguished as such preoperatively. X-ray films may show displacement of the stomach downward and to the right in the abdomen. The cysts may displace the left kidney downward. If calcification of the cyst wall is present the diagnosis is readily made. Sweet(11) maintains that large cysts can be properly diagnosed preoperatively but differentiation should be made of splenic enlargement and of cysts of the mesentary, omentum, pancreas, kidney and left lobe of the liver. A large aneurysm of the aorta, renal or lienal artery must not be overlooked. Martin, Zega and Adamson(8) recommend hematologic investigation including bone marrow studies.

Martin, Zega and Adamson(8) investigated the early treatment of splenic cysts and found that marsupialization was the method of choice. Today removal of the entire spleen is the preferred method since practically no untoward effects develop postoperatively from the absent spleen and because technically it is easy and safe. Marsupialization requires a prolonged post-operative course and is rarely if ever necessary. Splenectomy gives less than 4% mortality. McClure and Altemeier(9) mentioned that enucleation of the cyst has been performed, but feel such a proceedure is rarely feasible.

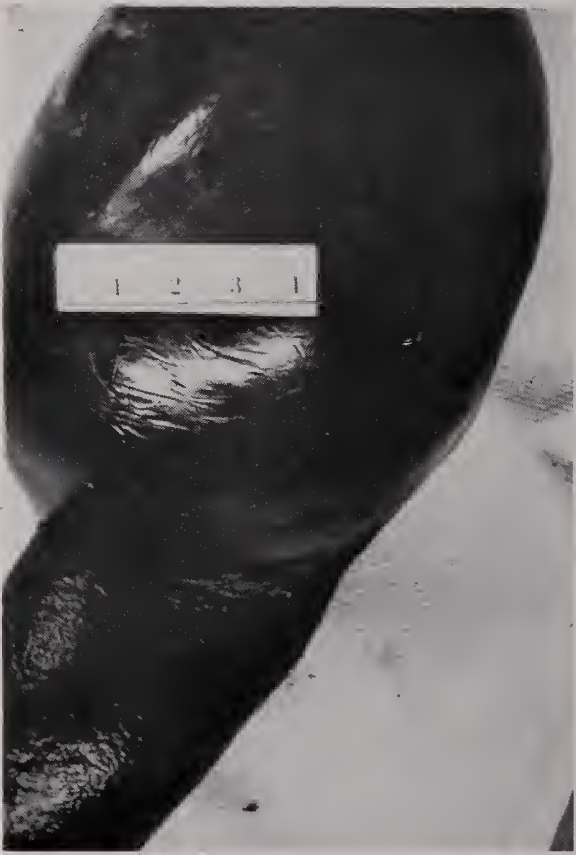

Fig. 2—Gross photograph showing spleen with cyst before opening, and viewed from slightly different angle.

CASE REPORT

History: B.K., white female, age 13 years, was first seen at the Nebraska Orthopedic Hospital, Lincoln, Nebraska on May 18, 1950. Her main cause for admission was a kyphoscoliosis of undetermined etiology. The patient had had a right facial paralysis since birth. She had visual disturbance for several years. She had had pain in her shoulders for a few months prior to admission and because a curvature of the spine was noted she was sent to the hospital.

Physical Examination: The patient was a well developed, well nourished, white girl who did not appear acutely ill and was in no distress. Head and neck were normal. There was a hyperopic astigmatism but the fundi of the eyes were normal. The right facial paralysis was obvious. Heart and lungs were normal. The abdomen was large and rotund and a large mass 15 cm. in diameter was found which was rotund, smooth and was displaced readily from the left upper quadrant of the abdomen to the lower abdomen. The mass was nontender, firm and did not pulsate. There was no evidence of gaseous distention and peristalsis was normal. There was a marked kyphoscoliosis to the right of the dorsolumbar spine. The trunk was shifted slightly to the right and the right shoulder was slightly higher than the left. There was a prominence of the right lumbar area compared to the left. The extremities were normal. Neurologically the patient was normal except for the right facial paralysis.

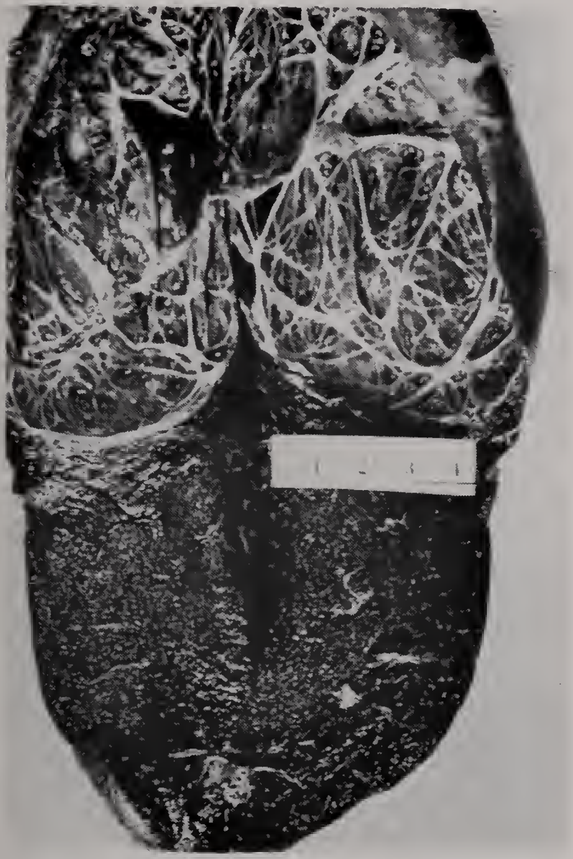

Fig. 3—Gross photograph showing spleen and cyst after opening. Note trabeculated lining of cyst and essentially normal character of cut surface of spleen.

Roentgenological studies of the spine showed right dorso-lumbar kyphoscoliosis. There was no evidence of individual vertebral pathology. The x-ray of the abdomen showed a clear, ovoid mass in the left hypochondrium. An excretory urogram showed no evidence of a urinary tract lesion, but the left kidney was higher in position than normal.

R.B.C., 3,448,000; Hbg., 75.2%; W.B.C., 8,100. The differential count was normal. Urinalysis showed no abnormality of urine excretion. Wasserman test was negative.

On May 29, 1950 under gas-oxygen-ether anesthesia an exploratory laparotomy was performed. A left upper transverse abdominal incision was made. A large cystic mass was found at the lower pole of the spleen. The body of the spleen itself was normal as to size, shape, color and consistency. No accessory spleen was seen. A splenectomy was performed according to the method of the senior surgeon as described in the Nebraska State Medical Journal of January, 1936. The surgical proceedure was uneventful. The post-operative course was very satisfactory. The wound healed per primam. The anemia was treated with oral iron therapy and diet. The patient was then subjected to orthopedic correction of the spinal curvature.

Pathological Report: The gross specimen consists of a large, irregularly shaped spleen weighing 950 grams with a large, rounded, apparently cystic tumor mass at the lower pole (Fig. 1 and 2). This entire specimen measures about 16x10.5 cm. in size at points of greatest diameter. The organ is peculiarily shaped in as much as the major portion of the spleen is of normal size, thin, flat and with normal contour, whereas the large tumor arises from the lower portion and bulges out giving the size and diameter and weight described above. The specimen was bisected to reveal a large cystic tumor at the one edge of the spleen, which itself measures about 10 cm. in diameter and which is filled with clear, yellow fluid containing some cholesterin crystal deposits. The cyst cavity is well demarcated from the spleen itself, but is surrounded by spleen (Fig. 3). The wall measures only a few millimeters in thickness in some areas, whereas it is bounded by the entire substance of the spleen at other points. The rest of the spleen appears to be quite normal in its gross appearance.

Microscopically, paraffin sections of the spleen reveal that the spleenic substance itself is quite normal with slightly dilated vascular sinusoids and with fairly well defined Malpighian follicles. There is compression atrophy of the splenic substance immediately adjacent to the cyst. The cyst wall itself is of a thin fibrous type showing a definite epithelial-like lining which is probably endothelial in origin. This consists of a single layer of cuboidal cells without ciliation and with no other significant change. There was no evidence of stratified squamous epithelium present. There is no evidence that this is an echinococcus cyst or that it is of specific etiology.

Diagnosis: Large, benign, endothelial cell lined cyst of the spleen.

SUMMARY

1. All forms of non-parasytic cysts of the spleen are uncommon. The total number of such cysts reported is 184, not including the case in this report.

2. Cysts of the spleen are classified into true and false cysts. True cysts include

parasitic and epithelial or endothelial cell lining and are incapable of secretory function. True non-parasitic cysts are exceedingly rare.

3. The etiology of splenic cysts is not known. Some theories as to their origin have been described.

4. Symptomatology of lienal cysts is not distinctive nor characteristic. Pressure of a cyst on other abdominal viscera may cause symptoms.

5. Splenectomy is the preferred method of treatment and carries a low percentage of morbidity and mortality.

6. A case report of a true endothelial cell lined cyst of the spleen treated by splenectomy has been presented.

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PHYSICIANS' ART SHOW

The American Physicians Art Association will have an art exhibit, as usual, during the A.M.A. convention at Atlantic City, N.J., June 11 to 15, 1951, inclusive. Any physician in the United States, Canada and Hawaii desiring to participate in this show should communicate with the secretary for particulars.

J. Henry Helser & Co., Investment Managers with offices on the Pacific Coast, are the new sponsors of the American Physicians Art Association and will award 200 trophies besides a special Helser Trophy — a large decorative cup depicting Yankee ingenuity. This cup is to be awarded for art work done in any medium. Also the large Popularity Trophy will be awarded to the owner of the art piece receiving the most popular votes during the A.M.A. convention. Over 4,000 members of the American Physicians Art Association will receive shortly, entry blanks, shipping labels and rules about this fourteenth art exhibition.

The Annual Art Banquet will be held Tuesday evening, June 12 at the Marlborough-Blenheim Hotel, Atlantic City, N.J.

F. H. REDEWILL, M.D., Sec.,
American Physicians Art Assn.,
760 Market Street,
San Francisco 2, Calif.

Hypofunction of the Adrenal Cortex in Infancy

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In recent years the complexity of the physiology of the adrenal cortex has gained respect and appreciation in the laboratory and in the clinic alike. Knowledge of its functions has been gathered by observation of the numerous symptom-complexes produced by hyperactivity of various portions of the gland in patients with adrenal cortical tumors and from the physiologic deficiencies noted in persons with hypofunction of the cortex. Hypofunction may be caused by failure of the cortex properly to develop or by destruction of the cortex by disease (tuberculosis, histoplasmosis, torulosis, neoplasm)⁽¹⁾.

It is the purpose of this report to call attention to that group of infants suffering from adrenal cortical insufficiency, caused probably by a failure of the gland to develop adequate ability to secrete a specific adrenal hormone, and to report a case observed by us in the Children's Memorial Hospital in Omaha.

Jaudon(2) first described this syndrome in 1946. His report included the case histories of nine infants who showed similar symptoms and who were treated successfully with pork adrenal cortex extract (ACE) and with desoxycorticosterone acetate (DOCA).

The symptoms observed were anorexia, vomiting, episodes of unexplained dehydration and failure to gain weight. Five of the nine were hypoglycemic. It was shown that in these infants there was decreased ability of the renal tubules to reabsorb sodium and water.

The illness began during the neonatal period in every case and the babies were treated for periods of as much as twenty-two months before ACE and DOCA could be stopped safely.

In 1948 Jaudon(3) reported five additional cases of infants with the same symptoms. Four of these showed symptoms typical of pyloric stenosis and two were subjected to surgery. No pyloric tumor was found in either. All these infants required the administration of DOCA and salt for long periods of time in order to sustain life. All of them showed low CO_2 combining power, elevated NPN, low serum Na, and elevated K. The only disturbance which could be demonstrated was that of the adrenal cortex. All infants had a normal glucose tolerance test. All five patients were boys. Jaudon observed this disease in only two girl infants.

CASE REPORT

R.C.S., admitted 6-12-49. The patient was a nineteen day old white male who was apparently in good health until three days prior to admission when his mother noticed that he was not nursing from the breast as eagerly as formerly and seemed hungry after feeding but refused a complemental bottle. The child was started on a formula two days prior to admission but began spitting up. This had continued to time of admission. On the day prior to admission the abdomen was tense and distended. This had become progressively worse. The child seemed to be in pain.

Bowel movements were of normal consistency, number and color. Past history and family history were negative.

Physical Examination: The patient was fairly well developed. Weight was 7 pounds, 7 ounces. The baby had a middle ear infection on the day of admission, with temperature of 103° F. (rectally). The abdomen showed marked distention and slight tympany, with no abnormal masses or bowel sounds. There was a questionable fluid wave in the abdomen at time of admission.

Laboratory Findings (on admission): WBC 28,300 with 20% segmented forms and 80% staff forms. RBC 3,710,000. Hglb. 14 grams.

Urinalysis was negative except for a trace of albumin. Urine culture showed no growth.

X-ray of chest was negative. The abdomen showed fluid within the stomach and small fluid levels within the small bowel which was considered indicative of partial obstruction. There was also some free fluid in the peritoneal cavity.

Hospital Course: The patient was started on hypodermoclysis of Ringer's Lactate solution, and the stomach was lavaged. Penicillin and sulfadiazine were also started. By the second hospital day after several enemas the abdominal distention was somewhat reduced and patient's color was better. At that time a working diagnosis of peritonitis of either streptococcal or pneumococcal origin was made. There were three or four sharply demarcated red areas on the skin which were thought to be of embolic origin. A blood culture was taken but proved to be negative. The patient was taking fluid by mouth, having small stools, the temperature was normal and the tympanic membranes were not so red. The abdomen was still distended. Streptomycin was begun. The blood count showed WBC 23,900 with 42% segmented forms and 35% staff forms. The rest of the differential was normal. The RBC was 3,940,000 with Hglb. 12.5 grams.

The patient seemed to be showing slow improvement in that he was taking and retaining formula, his abdomen seemed softer, and his temperature curve was flat. Six days after admission the blood count was repeated and found to be WBC 33,900 with 34% segmented forms, 32% staff forms. RBC 3,650,000 with Hglb. 11 grams. An x-ray of the abdomen showed no evidence of intestinal obstruction but distention of the bowel was that of an ileus associated with considerable fluid within the peritoneal cavity.

Twelve days after admission the child was on Olac formula and was maintaining his weight but the RBC had fallen to 3,660,000 and Hglb. 11.5 grams. Several whole blood transfusions were given during the ensuing days. He was having eight to ten diarrheal stools daily. At that time the patient was receiving an iron preparation which was later felt may have been the cause of the diarrhea. After the iron was stopped, the number of stools slowed. About this time the child began vomiting 50-120 cc. daly. Atropine was given orally without effect.

The patient began losing weight in spite of adequate food and fluid intake. He was started on a Nutramigen formula and given parenteral fluids. Stools were reddish-brown in color with much mucus and were positive for qualitative trypsin. The course was progressively downgrade with the child making tremendous weight gains and losses even though he was receiving the same amount of parenteral fluids and oral intake of formula.

Repeated x-ray studies of the gastro-intestinal tract showed pronounced gaseous distention of the small intestine and to some extent the colon.

The diaphragm was elevated with restriction of the ventilation of the lungs. There was minimal peritoneal exudate. These findings were believed to be causing interference with coordination of peristalsis.

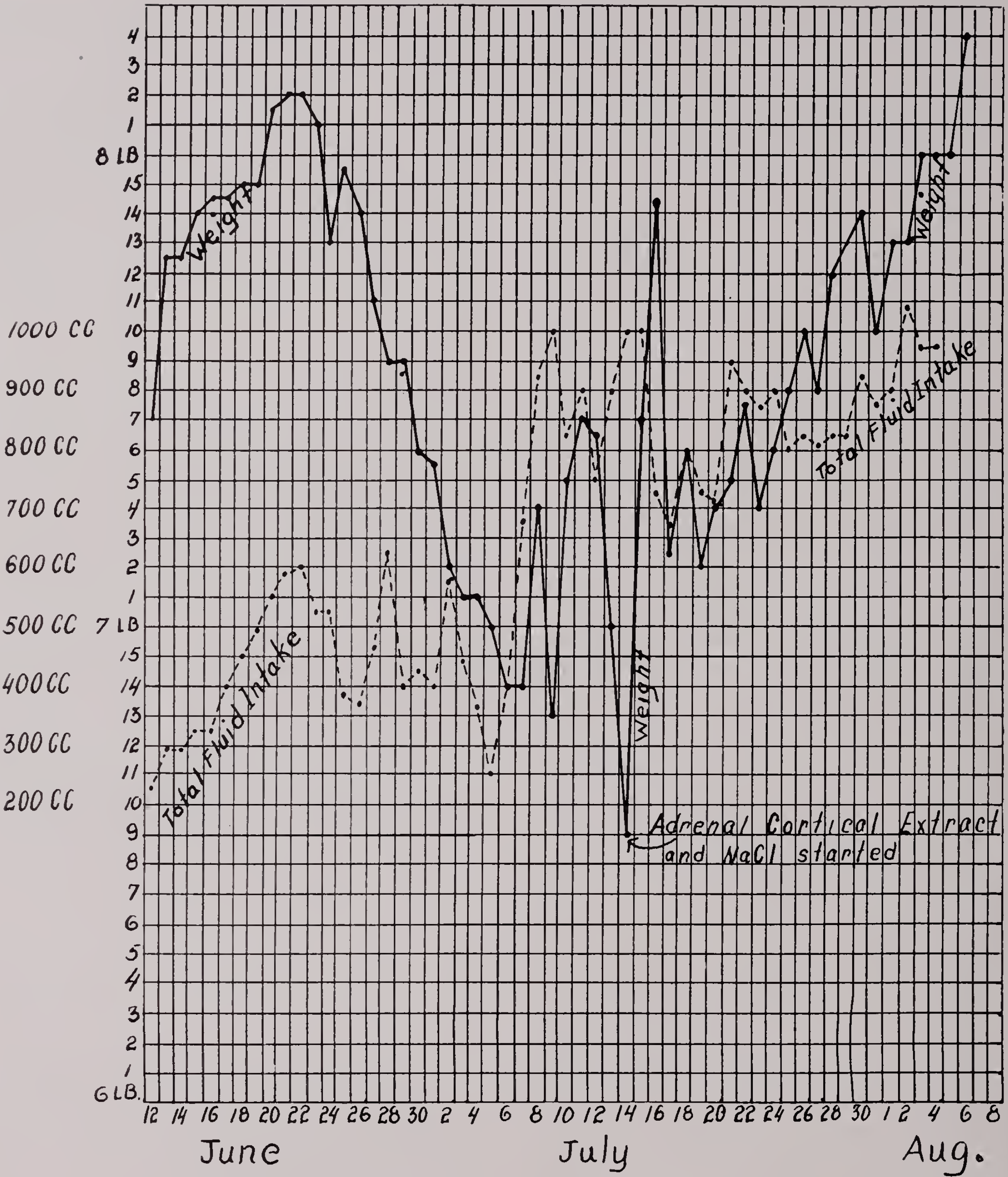
On July 14th the patient was started on intramuscular adrenal cortical extract (ACE). Sodium chloride, two grams daily, was added to the formula. The child gained fourteen ounces the next day. The following day he was retaining all of his feedings and gained another seven and a half ounces. The following day he lost twelve ounces but following this the child made progressive gains of one to three ounces daily.

There was no further vomiting or diarrhea. His mental attitude seemed much improved since he was more interested in surroundings, smiled more and cried less. He was also able to hold his head up for the first time.

On July 26th the adrenal cortical extract was changed to desoxycorticosterone acetate (DOCA) in dose of two mgm. daily. Progress continued satisfactorily with normal stools, no vomiting and gain in strength. He was apparently hungry, chewed on his fists and nursed vigorously from the bottle. Weight gain was progressive.

By August 4th the child was improved enough to be discharged. The mother was taught to give the intramuscular medication which was decreased to 1 mgm. of desoxycorticosterone acetate daily by that time. The dosage of NaC1 was continued at two grams daily.

In September the family moved to Cedar Rapids, Iowa, where Dr. Morgan Foster has cared for the patient. He reports that it was possible to withdraw DOCA in December 1949 without untoward effects and that the baby was taken off the salt in February of 1950 and that he tolerated this well. At age eleven months the baby was reported to weigh twenty-one and a half pounds, was twenty-eight and one-fourth inches tall and was bright and



active. He has received no medication since age nine months.

DISCUSSION

The dosage of DOCA varies from 0.5 mg. daily to 5. mg. daily. It is felt that DOCA is preferable to ACE in treatment of this condition. First, it is believed that the illness represents a specific deficiency of one hormone only, a hormone whose action is identical with that of desoxycorticosterone acetate. Secondly, it is feared that administration of ACE may depress secretion of the other adrenal cortical hormones. Third, DOCA is less expensive than ACE. Finally, DOCA is as effective as ACE.

These infants should receive, in addition to DOCA, daily doses of NaC1, varying in amount from two to three gms. The dosage of both DOCA and NaC1 must be determined by trial and observation.

Shock is sometimes observed and this calls for intravenous administration of ACE.

Periodic attemps may be made to reduce the dosage of DOCA and of NaC1. Medication may be stopped entirely as soon as the infant is able to maintain a normal salt and water metabolism without treatment. Usually DOCA may be withdrawn completely before NaC1 can be omitted safely.

Overdosage produces symptoms of continued weight gain at an unprecedented rate, the appearance of edema and an abnormal elevation of blood chlorides.

In the differential diagnosis one must consider feeding problems, gastro-intestinal allergy, intestinal obstruction, pyloric stenosis, congenital renal defects, macrogenitosomia with adrenal insufficiency and Addison's disease. The infant with a feeding problem usually does not show unexplainable periods of dehydration, does not show the typical laboratory findings and, of course, does not respond to treatment with DOCA and NaC1. The same may be said for the infant with gastro-intestinal allergy. Intestinal obstruction and pyloric stenosis are usually accompanied by constipation and the x-ray may be valuable in diagnosis. Many of these patients have come to surgery with a diagnosis of pyloric stenosis. No pyloric tumor was found and the infant's symptoms persisted post-operatively. The true diagnosis was made later. Addison's disease has been described in infancy but these infants usually show other signs; such as tuberculosis or some other infection (e.g. histoplasmosis and torulosis) (1).

The role of infection as a possible etiologic factor in this disease has to be considered. Our patient developed symptoms of adrenal cortical insufficiency immediately after he had recovered from acute peritonitis. In two of Jaudon's cases the symptoms of adrenal insufficiency developed following acute infection. It is certainly possible that the adrenal cortex in these three infants was normal at birth and was damaged by the acute infection from which the baby suffered. It seems obvious, however, that in most instances the symptoms are produced by adrenal cortical insufficiency on the basis of congenital maldevelopment of those glands.

SUMMARY

1. The subject of adrenal cortical hypofunction in infancy is reviewed briefly.
2. The case history of a baby showing this deficiency is presented.
3. In any baby presenting symptoms of anorexia, vomiting, bouts of unexplained dehydration and failure to gain weight, a therapeutic trial of desoxycorticosterone acetate and NaC1 is warranted.

(Bibliography in Reprints)

Compound Volvulus Complicating Pregnancy

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Volvulus complicating pregnancy was first reported by Braun in 1885. He stated that his case represented the only one in sixty thousand deliveries that had come under his observation. The volvulus occurred at term, and the patient died. In 1931, Andre Charles Lambert surveyed the literature of the world and collected sixty-one cases. In 1944 Kohn, Briele and Douglass added three that Lambert had missed, thirteen that had been reported subsequent to Lambert's series, and two of their own. Since then there have been three more cases published in the foreign literature bringing the total reported to date to eighty-three. It is interesting to note that of the total number of cases only six have thus far been recorded in the American literature. Our case, therefore, becomes the seventh. We believe it is the first reported instance of a compound volvulus complicating pregnancy.

REPORT OF CASE

Mrs. T. F., a twenty-five year old primipara, was admitted to the hospital July 18, 1949 for induction of labor. She had gained thirty-five pounds in weight on a restricted diet during her pregnancy and was about ten days overdue at the time of admission. Using saddle block anethesia she was delivered of a normal male infant after a twenty-nine hour labor. She vomited a few times during labor but was generally able to retain the usual diet.

The immediate postpartum course was entirely satisfactory except for a mild elevation of temperature which was attributed to prolonged labor. About 3:30 P.M. on the fourth postpartum day she experienced sudden severe pain in the mid-abdomen. Physical examination did not reveal anything significant. An enema was given and returned quantitatively without feces or gas and afforded no relief. By midnight there was distention gr. II and splinting gr. III over the entire abdomen. A Levine tube was inserted into the stomach and continuous suction applied. Initial aspiration of the stomach did not reveal any significant retention. About 7:00 A.M. of the fifth postpartum day abdominal pain became exceedingly severe and profound shock supervened. The pulse rate rose rapidly to one hundred fifty and the systolic blood pressure fell below sixty. A transfusion of fifteen hundred cc. of whole blood restored pressure to 90/60 and abdominal exploration was forthwith undertaken. A pre-operative diagnosis of a ruptured liver with hemoperitoneum was entertained along with that of a ruptured uterus. Perforation at some point in the gastrointestinal tract was also considered.

Upon opening the abdomen about three quarts of bloody fluid were evacuated from the peritoneal cavity. The sigmoid colon had undergone a three hundred sixty degree clockwise turn on its mesentery producing obstruction but not strangulation of the loop. An abnormally long small bowel mesentery had rotated about the base of the twisted sigmoid one and a half turns producing strangulation and gangrene of the terminal six feet of the small gut. Detorsion of the small bowel and then of the sigmoid was accomplished. The latter was viable and attention was directed to the devitalized ileum. Resection of the gangrenous segment was carried out. Primary end-to-end ileo-ileostomy was possible inasmuch as the terminal three inches of the ileum was viable. A Witzel enterostomy was done proximal to the suture line as a decompression measure. The patient withstood the procedure fairly well considering her desperate state. One pint of blood was given during the operation and one pint immediately following.

The postoperative course was surprisingly uneventful except for high temperature (104 degrees) and pulse (140) readings the first three days. Continuous suction was applied to the Levine tube and large doses of penicillin and streptomycin were given. Fluid, caloric, and electrolyte balance was maintained by intravenous administration. Temperature and pulse gradually returned to normal in five days. The Levine tube was withdrawn on the seventh postoperative day and feeding by mouth begun. The enterostomy tube was removed on the 13th day and the patient was discharged from the hospital on the 15th postoperative day.

The patient experienced some disability during the first six weeks after operation from frequent loose bowel movements. Stool examination revealed a lack of fat absorption. The diarrhea was brought under control by the administration of Pancreatin gr. X, t.i.d., five units of crude liver and an ampoule of Solu-B twice weekly. At the present time she has two soft formed stools a day.

DISCUSSION

The incidence of volvulus is definitely geographical. In this country it comprises not over ten per cent of all intestinal obstructions; whereas in Middle Europe, Russia, and Scandinavia it accounts for over half. In the United States volvulus of the small bowel is four times more frequently encountered than volvulus of the sigmoid. The literature of Middle Europe, Russia, and Scandinavia, on the other hand, implicates the sigmoid as the site of volvulus in thirty per cent to sixty per cent of all cases.

The predilection of volvulus of the sigmoid for elderly males is well known. Volvulus of the small intestine and cecum does not exhibit such a striking age and sex specificity. Torsions of the intestinal tract, particularly those of the pelvic colon, are prone to recur. Bloodgood's classic illustration of this predisposition was a patient who had thirty-two recurrences in six years following the operation of simple detorsion.

The etiology of volvulus is not entirely understood. Torsions of the sigmoid colon are always associated with an abnormally long flexure. The greater the length of the flexure the more marked is the disproportion between the periphery of the mesosigmoid and its attachment to the posterior abdominal wall, thus supplying a long narrow pedicle around which the bowel may turn. Ordinarily, there is no demonstrable cause of volvulus of the small intestine. Occasionally improper rotation of the gut, an adhesive band, or a tumor is the etiological factor. Obviously, an abnormally mobile cecum is a prerequisite to cecal volvulus.

When volvulus complicates pregnancy it usually supervenes during the last trimester or immediately postpartum. Thus, of the nineteen cases reported by Kohn, et al, ten occurred during the third trimester and four postpartum. Of the four cases herein reported (three from the literature and one of our own), three occurred during the third trimester and one postpartum.

Volvulus as a complication of pregnancy usually occurs in multipara. Lambert ascertained that such was the case and this was confirmed later by Kohn, et al. Two of the three cases reported in the literature since 1944 have been multipara. Our patient was a primipara.

Volvulus complicating pregnancy most frequently affects the sigmoid colon. The site of volvulus in the combined collected series of Lambert and of Kohn, et al was as follows: sigmoid, forty-one cases; large intestine other than sigmoid, nineteen; small intestine, nineteen. All three of the cases appearing in the literature since have been sigmoidal. Our case involved both the small intestine and the pelvic colon.

The degree of torsion may vary from one hundred eighty to eight hundred degrees. A turn of more than one hundred eighty degrees is usually accompanied by obstruction and strangulation, although rarely even a volvulus of three hundred sixty degrees may occur without causing either. Once a twist of three hundred sixty degrees has been accomplished spontaneous reposition is unusual because the enlarging loop is held fast in position by the abdominal parietes. Likewise, and by the same token, rotation in excess of three hundred sixty degrees is seldom observed in volvulus of the sigmoid. Torsions in excess of three hundred sixty degrees are more often noted in the small intestine and the cecum. The end result is the production of a double obstruction which may be complete or incomplete. In case the two point obstruction is complete a "closed loop" results.

The incidence of gangrene depends upon the degree of torsion and the duration of the volvulus. When operative intervention is undertaken late it is high.

The symptoms of volvulus complicating pregnancy are those of acute intestinal obstruction. Volvulus of the sigmoid is characterized by severe abdominal pain of sudden onset associated with obstipation and rapidly increasing distention. There may be early transient emesis, but otherwise vomiting is not a prominent featue. Shock may be profound when there is sudden strangulation of the loop. Palpation of a mass and localized abdominal tenderness are inconstant and comparatively uncommon findings. Scout film of the abdomen ordinarily reveals enormous distention of a single loop of bowel (sigmoid) which rises out of the pelvis. Barium enema may demonstrate a characteristic outline of the proximal portion of the rectum described by Griffin, et al, as the "ace of spades" deformity. Volvulus of the small intestine and cecum is manifested by cramping abdominal pain, distention, obstipation, and vomiting. In a twist involving the entire small intestine only the stomach and duodenum may be distended, and vomiting may cease after an initial emesis. Palpation of a mass is a rare physical finding. Scout film of the abdomen exhibits gas distended coils of small intestine.

Actually, a pre-operative diagnosis of volvulus is seldom made. Of the three cases reported in the literature since 1944 a pre-operative diagnosis of volvulus was made in one, entertained as a possibility in one, and unsuspected in one. It was not considered at all in connection with our patient's condition. However, the important thing is to recognize the existence of an intestinal obstruction or an intra-abdominal catastrophe and to undertake surgical correction at once. Review of the literature indicates that the overall mortality rate for the mother is in the neighborhood of twenty-five per cent. This figure is much higher in those requiring resection, and much lower in those treated by simple detorsion. The overall fetal mortality figure in the literature is approximately the same as the maternal. Of the four cases reported since 1944 (including our own) there were one maternal and three fetal deaths.

The treatment must be individualized. If the bowel is viable simple detorsion without disturbing the pregnancy is the procedure of choice. The administration of large doses of corpus luteum hormone before and after operation may aid in the prevention of the onset of labor. If the intestine is gangrenous and the fetus at the stage of viability, Caesarean section should precede resection. Sigmoidal resection should be extra-peritoneal using a three blade clamp. Intestinal continuity is reestablished at a later date. Small bowel resection should be followed by primary anastomosis.

SUMMARY AND CONCLUSIONS

1. Report of a case of compound volvulus occuring postpartum in a twenty-five-year-old primipara. Treatment consisted of simple detorsion of a viable sigmoid and resection of six feet of gangrenous ileum with primary end-to-end ileo-ileostomy. The patient made an uneventful recovery.

2. Presentation of three cases of volvulus complicating pregnancy which have appeared in the literature since the report of Kohn, et al, in 1944. All affected the sigmoid colon. Two were multipara and one a primipara. All occurred during the last trimester. There were one maternal and three fetal deaths.

3. Volvulus complicating pregnancy is extremely rare. Our case represents the eighty-third to date in the literature of the world and the seventh in the literature of this country. It is the first recorded instance of compound volvulus complicating pregnancy.

4. Volvulus complicating pregnancy most frequently affects the sigmoid, is more common in multipara than in primipara, and usually occurs during the last trimester or postpartum.

5. A pre-operative diagnosis of volvulus is seldom made. Recognition of the existence of an acute intestinal obstruction or an intra-abdominal catastrophe requiring prompt surgical intervention is the important consideration.

6. When the bowel is viable simple detorsion without disturbing the pregnancy is the procedure of choice. When the bowel is gangrenous and the fetus at the stage of viability Caesarean section should precede resection of the devitalized segment of intestine.

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Cleft Palate*

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The operation known as staphylorrhaphy presents one of the most difficult and important problems in the field of surgery.

We often hear remarks like: "I do not believe in severing the palate along the posterior border of the horizontal plates of palate bones," or "I do not believe in lateral incisions."

The answer is, one would not be able to make a satisfactory palate without lateral incisions nor is it possible to get length if the palate is not severed along the posterior border of the horizontal plates of palate bones.

Many of the lateral incisions made, fail to lengthen the palate. The reason is the lateral incision is not made right. The lateral incision should be made about one-eighth to one-fourth of an inch from the cemento-enamel junction of the teeth back around over the tuberosities and outside of the blood supply. By traction in the act of swallowing and speaking, the tensor palati muscle in conjunction with the palatopharyngeal muscle dilates the pharyngeal orifice of the eustachian tubes. If this lateral incision is not made properly, they will fail in this function, and atrophy of the drum membrane will take place and deafness to a greater or less degree will ensue. Further, due to lack of function, complications of the ears follow. If the tensor palati nerve of the tensor palati muscle is severed, regeneration never takes place; therefore it is permanently out of function. As a result there is no dilatation of the pharyngeal orifice of the eustachian tube.

Commencing with the mesial line, one can dissect out the attachment of five muscles, each of which is, duplicated on the opposite side and each of which has such relations to a mesial line that, in case of cleft or split, it serves more or less to draw the parts postero-laterally.

These muscles, mentioned in the order of their significance to such lateral displacement and, consequently, in their relation to the operation of staphylorrhaphy, are the tensor palati, palato-glossus, levator palati, palato-pharyngeus and azygos uvulae. Of all these structures the tensor palati plays the most important part and it, therefore, demands first consideration. This muscle arises from the scaphoid fossa, at the root of the internal pterygoid plate, from the anterior surface of the eustachian tube and from the spinus process of the sphenoid bone. The tensor palati muscle descends from the origin of which we have just informed ourselves, and, meeting the hamular process, it winds, as a tendon, just distally around it and then by a fan-like expansion spreads itself into the substance of the soft palate. Its action is evident: it expands the palate laterally and dilates the pharyngeal orifice of the eustachian tube.

The muscle winds, as a tendon, around the hamular process from the back outwardly, inwardly and forward.

Another important muscle is the palato-glossus. This is the anterior half-arch, the constrictor isthmii faucium. It arises from the soft palate on either side of the uvula, passing outward, is inserted into the sides of the tongue, blending with the stylo-glossus muscle.

The palato-pharyngeus muscle arises from the soft palate by an expanded fasciculus and, passing outward, goes to be inserted into the posterior border of the thyroid cartilage. The two muscles constitute the posterior half arches.

The levator palati muscle arises from the petrous portion of the temporal bone, passes into the interior of the pharynx and then descends obliquely downward and inward, spreading its fibers out over the posterior surfaces of the soft palate as far as the raphe.

The action of the fifth and last muscle, the azygos uvulae, is perhaps not necessary to consider, its influence for separation of the wound being very trifling.

If the incisions are made properly and the attachment of the tensor palati muscle is relieved and the muscle carried inward one obtains a long, flexible palate which is so important in speech. A certain percentage of children with cleft palate have a speech defect due to a defect in the speech center of the brain. Even perfect physiological surgery cannot give these children good speech. If the lateral incision is carried straight back through the tensor palati muscle, this muscle goes out of function permanently, and we never get a dilatation of the pharyngeal orifice of the eustachian tube. One, therefore, has only closed a cleft and has not done a physiological piece of surgery.

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*Presented before the American Association of Plastic Surgeons. September 13, 1949, in Montreal, Canada.

One must have a type of sature splint to relieve tension on coaptation sutures. Number 24 gauge of pure silver wire passed through the msculature of the palate, supported by lead plates, as advised by Dr. Trumen W. Brophy, is ideal.

The majority of surgeons who do staphylorraphies, especially where there are large clefts, place packs in the line of the lateral incisions. They stink, as a usual thing, and may complicate what otherwise would have been a successful result. There is no need for these packs, and I condemn them.

When the mucoperiosteal flaps or the palate flaps are freed from the bone clear along the posterior border of the horizontal plates of palate bones and around the hamular process, they act like the closing of a suspension bridge. In the vast majority of cases, these openings made by lateral incisions can be very nicely closed, placing no tension on the coaptation sutures. Adding to the coaptation sutures, I make several over and over whip horsehair sutures. When I first recommended this additional support, Dr. Brophy told me that it would save many postoperative openings in the palate. He found this to be true, and so did I. Therefore I recommend this additional support be given the coaptation sutures to relieve tension.

The early teachings relative to postoperative care were sprays of salt water. I believe the more we let the palate alone after the operation the more likely we are to have a good result. At least this has been my experience through the years.

One must be certain to place cuffs on the elbows of these children so that they will not bend their elbows and push a thumb or finger into the palate and destroy it.

Now coming to the unilateral cleft and the bilateral cleft of the alveolar arch, the bilateral cleft being associated with a protrusion of the premaxillae, and a cleft lip.

The majority of surgeons today condemn the Brophy alveolar arch operation on the assertion that you destroy permanent as well as temporary teeth, or that there is a greater irregularity of the teeth.

These two statements are without foundation and are made because the surgeon does not know how to properly perform a Brophy unilateral and bilateral cleft of the alveolar arch.

If the silver wires are passed through the alveolar arch in proper position the teeth are rarely disturbed. The procedure usually employed by the majority of surgeons is the building of the lip, leaving the cleft of the alveolar arch unattended. In the unilateral cleft, the nose is always off center and remains so through life. With a bilateral cleft and a protrusion of the premaxillae, when a lip operation is made over these parts, the child always has a silly expression and the lip is in protrusion. Many who follow this procedure claim that the pressure of the orbicularis oris muscle forces the premaxillae back into position and also forces the palate back. This is not true. If it permanently goes back at all, there is a buckling, or a folding, of the vomer. It does not push it back at all, and all that they have to do to find this out is to make proper measurements following their work. From tuberosity to tuberosity, the distance is just that much greater than it should be than the width of the cleft.

When a Brophy alveolar arch operation is not made, the cleft is left wide, and it is impossible to gain a long, resilient, flexible palate. At normal birth, the upper arch sets inside the lower arch. With a cleft, either unilateral or bilateral, the opposite is true. The lower jaw sets inside the upper arch.

A cleft of the alveolar arch, whether unilateral or bilateral, can be likened to a fracture. Would we leave a fracture go for two or three years before attending to it?

When a Brophy unilateral or a bilateral cleft of the alveolar arch operation is properly made, we have immediately given the deformed child a baby face in place of the broad face with which it appears at birth.

Many unjust remarks are made about having a greater irregularity of the teeth following the Brophy operation. These are without foundation. Many children have horrible irregularities when born without cleft palate and cleft lip. In the majority of instances, the teeth are right in line with the cleft, whether it is unilateral or bilateral, and are of no value later on so far as function is concerned. No matter what procedure has been carried out, practically every child born with cleft palate has to have some orthodontic work done later.

Many decry the loss of certain teeth. As I have stated previously, many of the teeth are right in the line of the cleft and never amount to anything following any procedure. The loss of two or three temporary teeth is a small matter when compared to a fine correction restoring normal baby features.

Some have said that the mucous membrane unites when it is brought into apposition. This is not true. Only freshened membrane unite. When it is not united, secretions from the mouth pass up into the nose and are of constant trouble to the sufferer. In the majority of instances, when the Brophy alveolar arch operation is made properly, this complication is avoided.

Through long years of experience, I am convinced that those who condemn the Brophy alveolar arch operation are not competent to perform such an operation. Just because one surgeon has crushed and destroyed the arch in making a Brophy alveolar arch is no reason to condemn the operation in the hands of a surgeon who can perform the operation properly. Twenty or twenty-five of the members of the American Association of Plastic Surgeons had the results of this operation demonstrated to them when they met in Omaha and had an opportunity to review eighty-one cases from babyhood to adult life. Remarks by many of the eminent men were that they had not seen universally as fine results following the Brophy alveolar arch operation as they witnessed here.

I am not presenting this review as a matter of self-praise. I do not consider such praise complimentary. I am merely stating facts, and I do not want any member of this fine organization to take anything other than a fine attitude in the presentation and discussion of this subject.

Many of the eminent men who have gone before me are deeply appreciated, and anyone who has contributed to the development of this work receives my highest respect. My desire is to give everyone consideration and credit for anything he has done. I have no desire whatsoever to take credit for anything that has not been developed by me.

Treatment with Thyroid Extract*

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This paper makes no attempt to discuss new or different uses of thyroid extract; every physician has used thyroid extract to advantage. It is the cheapest and most common hormonal preparation and therefore readily available for use and abuse. The dividing line between the two is not always distinct or stable.

For this reason it may be profitable to stop and consider the merits and demerits of the most common uses of this hormone.

There are four popular criteria for the indication of thyroid therapy:

1. Basal Metabolic Rate
2. Blood Cholesterol Level
3. Determination of Protein-bound Iodines
4. Clinical Impression

all of which have limitations:

The basal metabolic rate is not an accurate measurement to start with. Moreover it is misleading in children because of the wide variation in height and weight in the various ages of childhood. Yet, it is exactly during childhood, where thyroid therapy affords the most spectacular results. Even adults with pulmonary deficiencies, such as emphysema, have greatly altered vital capacities, which render the basal metabolic rate worse than useless. Any degree of cardiac decompensation also decreases the vital capacity and thus creates a similar situation.

With corresponding basal metabolic rate a high blood cholesterol level is indicative of hypothyroidism, a low one of hyperthyroidism, but other physiological and pathological conditions may influence the blood cholesterol content, so that at best it is not conclusive evidence. In children under the age of two however, it is of no value at all. Perhaps the greatest importance of cholesterol levels in adults lies in repeated determinations, because a change in values is helpful in the appraisal of the effect of thyroid therapy.

The only accurate indicator of thyroid function is the determination of protein-bound iodines. However at this time this method is not readily available here. In fact, there are very few centers in the USA, in which such determinations can be performed, and it is very gratifying to know that the Veterans Hospital in Lincoln, Nebraska, has begun to perform this tedious and difficult procedure. Up to now the Mayo Clinic was the nearest locality in which such a laboratory procedure could be carried out.

The last of the criteria mentioned is the clinical impression. It is the most subjective, intangible and inaccurate one, yet in the absence of protein-iodine values, the most important and decisive one. Our clinical judgment always will be the most important factor in our decisions. Laboratory tests have to be evaluated, and helpful as they are in modern medicine, there is none which could substitute for our clinical judgment.

As we are administering thyroid extract it may be well to remember what happens to the thyroid gland of a patient receiving thyroid extract. A normal thyroid gland acts as regulator of its own hormone, as any endocrine gland and adjusts its own output to increased or decreased demand. In this process the pituitary gland probably is an important regulator.

Under medication with thyroid extract a normal thyroid gland will develop disuse-atrophy, and our therapeutic doses have to become larger in order to achieve the same results as the treatment goes on. An inactive gland, of course, does not interfere, and for this reason the therapeutic dose will remain constant. A partially active gland will also atrophy if the medication surpasses the amount necessary to compensate for deficiency. In other words, if there is a need for thyroid medication, we obtain results with small doses. There never is any point in giving large doses of thyroid extract, particularly since they will be counteracted anyway by means of the endocrine interplay.

Immediately after the discontinuation of thyroid therapy our basal metabolic rate begins to drop sharply and where we had values of plus 30%, we encounter values below the normal rate within little more than a week's time. The negative values prevail for about six weeks, during which time the thyroid gland, now responding to normal stimuli, resumes function; and the basal metabolic rate returns to normal. Even prolonged thyroid therapy will not cause irreparable atrophy of the thyroid gland. After the medication has ended, the gland eventually will resume function. However, if the basal metabolic rate is determined before recovery of function, a low rate is obtained, and the previous treatment with thyroid extract will appear justified to the careless observer. We should adopt a definite rule that basal metabolic rates or any other thyroid function tests are not to be taken within six to eight weeks after discontinuation of thyroid therapy.

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*Read before the Lancaster County Medical Society on March 21, 1950.

The most gratifying therapy with thyroid extract is in children, in myxedema as well as in hypothyroidism. The main symptoms in these conditions are:

1. Physical and mental torpor.
2. Constipation.
3. Poor muscle tone.
4. Diminished sweating.
5. Stunted height with reversed skeletal proportions.
6. Dysgenesis of the epiphyses.
7. Stunted dental development.
8. Retarded cerebral development.
9. Dry skin.
10. Coarse and brittle hair.

Not all of these symptoms are necessarily present in one patient; yet, in children we have to rely most heavily on our clinical judgment. Blood cholesterol and basal metabolic rate are of little help. Perhaps the most important and conclusive single information is furnished by radiological evidence of delayed development of the carpal bones. A prompt diagnosis is particularly important in children, because with adequate thyroid therapy even a cretin will show normal mental and physical development — if therapy is started before the age of five. If treatment is started after that age, the child still may present normal physical development but there will be mental retardation, the severity of which will be increased proportionally with the age of onset of thyroid therapy. The amount of thyroid extract necessary for the adequate treatment of a cretin rarely is more than three grains daily.

All of us have been successful in treating dysmenorrhea with thyroid extract, and here too we cannot emphasize too much that as a rule a small dose will do better than heavy medication.

Amenorrhea may be due to hypothyroidism. Slim amenorrhoic individuals with a low basal metabolism probably are primarily pituitary disturbances, however they do respond to increased stimulation with thyroid extract.

Our thyroid hormone apparently is an instrumental factor in the intestinal absorption of iron salts. A hypochromic, normocytic anemia, which is refractory to standard therapy of iron deficiency anemias, always suggests thyroid deficiency and trial therapy with small doses of thyroid extract, combined with iron preparations, is entirely justifiable, even though the basal metabolic rate may be within normal range.

Sterility due to thyroid deficiency is a common problem and often is corrected with small doses of the preparation.

Other conditions, in which thyroid medication may be helpful, are certain cases of arthritis, showing a low basal metabolic rate and high blood cholesterol levels.

Recurrent corneal ulcers of obscure origin as well as refractory cases of vasomotor rhinitis may respond well to thyroid extract.

Thyroid medication is hepful in obesity, wherever clear cut hypothyroidism exists, otherwise it is a questionable procedure, and there certainly is no excuse for the treatment of obesity with massive doses of thyroid extract.

Wherever hypo- or hyperthyroidism are superimposed on cardiac decompensation, not only our diagnostic problem becomes complex, but the management of thyroid therapy is of crucial importance. Hyperthyroidism and the associated increased basal metabolism cause excessive work for the heart muscle. In the normal heart it may cause myocardial hypertrophy, but not dilation. However, superimposed on a cardiac defect it may contribute to decompensation in cases, where the defect itself would not have resulted in cardiac failure. In such cases thyroid pathology may be missed, because it is overshadowed by congestive failure.

In such a situation the basal metabolic rate is misleading procedure — (worse than worthless) — the electrocardiogram is not characteristic and the blood cholesterol level not conclusive. In the absence of facilities for the determination of blood iodines we have to rely entirely on our clinical judgment. One clinical sign is constant enough to be accepted as highly suggestive: If a heart in auricular fibrillation fails to slow down its rate under adequate digitalis therapy, obscure hyperthyroidism always should be suspected.

Hypothyroidism also may be superimposed on cardiac decompensation.

In complete or nearly complete hypothyroidism we find interstitial edema of the heart muscle, vacuolization of the muscle fibers, eventually resulting in cardiac dilatation. Clinically as well as in the electrocardiogram such a heart resembles a Beri-Beri heart. However, in case of doubt these two conditions may easily be distinguished, since the Beri-Beri heart improves dramatically under therapy with thiamine preparations, whereas the myxedematous heart is not affected by such treatment.

The blood pressure in a hypothyroid patient with cardiac decompensation often is increased and presents a characteristic small pulse pressure, which is due to a rise of the diastolic level. Generally speaking: Cardiac failure, which seems inexplicably and unproportionately extensive for the cardiac defect, always should arouse our suspicion of superimposed hypothyroidism. Such hearts usually do not respond to digitalis therapy as they should, and nausea results after relatively small doses. With the addition of thyroid extract digitalis usually is well tolerated, sometimes indeed, digitalis medication may not prove necessary.

With cautious thyroid medication the diastolic pressure will decrease, the heart diminish in size and compensation be re-established. The word "cautious" must be emphasized, because in such a situation the administration of large or even conventional doses of thyroid extract will effect an additional myocardial strain and acute cardiac failure with pulmonary edema and death would be the most likely outcome. Thyroid extract thus may become a dangerous drug. Like so many others in this category, it is not the drug which is dangerous. The doctor who administers it constitutes the danger.

Whenever we are dealing with cardiac decompensation, thyroid therapy has to begin with very small doses and the increase in amount of the extract has to be very gradual. Needless to emphasize that the patient should be kept in bed for the period of dosage-increase.

During the first two weeks of thyroid therapy the patient receives gr. 1/4 daily, if possible in divided doses. For the following two-week period the dose is raised to gr. 1/2 daily, for a third two-week period the dosage will be gr. 3/4, and so on, until the optimal dose is reached.

SUMMARY

Large doses of thyroid extract are rarely justified.

At any time that thyroid medication has reached the dose of gr. 3 without producing the expected results, one should reconsider the diagnosis or clinical indication for therapy rather than keep enhancing thyroid administration to harmful levels.

Intracranial Aneurysms*

A Clinico-Pathologic Correlation

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Because of better methods of localization and of therapy now available to patients having intracranial aneurysms, it seems advisable to review some of the clinical and pathological aspects of the condition. This, we hope, will serve to increase the physicians index of suspicion for the presence of such lesions. We feel that the more refined methods of localization and therapy will be useless unless the physician in his everyday practice can make the tentative diagnosis originally. The purpose of this paper is to present a brief review of some of the usual manifestations of intracranial aneurysms and then to present brief case abstracts with necropsy findings which we think illustrate both the usual and some of the unusual clinical and pathologic manifestations of this condition.

Most commonly, intracranial aneurysms involve the vessels of the Circle of Willis and manifest themselves when the complication of hemorrhage ensues. This hemorrhage is usually subarachnoid in location and since Gull's report in 1859(1), the syndrome of so-called "apoplexy in young individuals with the finding of large effusions of blood in the subarachnoid space" has been related to aneurysm of cerebral vessels. It is now generally accepted that practically all so-called non-traumatic spontaneous subarachnoid hemorrhages are the result of hemorrhage from aneurysm of a cerebral vessel. Since these aneurysms are frequently small and easily hidden by the thick layer of blood in the subarachnoid space, the exact localization of the source of the bleeding is sometimes difficult, even at autopsy.

Subarachnoid hemorrhage is responsible for about 2% of sudden deaths.(2) It comprises about 7% of all cerebral vascular disease and approximates in frequency the ordinary types of cerebral hemorrhage. Subarachnoid hemorrhage from cerebral aneurysms may occur at almost any age. McDonald and Korb(3) in an assembled series of over 1000 cases reported an age range from one and one-half years to eighty-seven years. However, 46% of these were under forty years of age.

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*Presented with kodachrome slides at Nebraska State Medical Association Meeting, Lincoln, May, 1949. Only a portion of the illustrations are reproduced in this printed text.

Concerning the etiology of cerebral aneurysms, Forbus⁽⁴⁾ has emphasized the importance of congenital weakness of vessel walls, and has called attention to muscular defects of media of the cerebral vessels at the points of bifurcation. He points out that most miliary intracranial aneurysms arise only from vessels of the carotid system; that they are almost all located at points of bifurcation of the vessels, and that these aneurysms are frequently independent of any inflammatory process, severe arteriosclerosis or trauma. On the other hand, Strauss⁽⁵⁾ and his co-workers have stated that in their experience, arteriosclerosis of cerebral vessels was the most common pathological condition responsible for the disorganization of the vessel wall and formation of aneurysm. Other associated disease processes in the body, such as syphilis or subacute bacterial endocarditis may play a part in the production of a few cerebral aneurysms.

About 48% of cerebral aneurysms are found on the internal carotid or middle cerebral artery, 15% on the anterior communicating artery and only about 28% in the vessels posterior to the internal carotid arteries. Ruptured aneurysm is found to be three times as frequent in the anterior portion of the Circle of Willis as in the posterior part.

Many of the clinical manifestations of the aneurysms that rupture into the subarachnoid space are dependent upon the site, amount and duration of the bleeding. Continued subarachnoid bleeding is, of course, incompatible with survival. Some observers feel that the duration of arterial leakage must be exceedingly brief if recovery is to result. Wolfe⁽⁶⁾ found that 29% of the patients with subarachnoid hemorrhage secondary to ruptured intracranial aneurysm died in the first attack. Usually, this first attack has not been preceded by any clinical symptoms sufficient to take the patient to the physician, and therefore little can be done to aid in the therapy of this group. More important, it is found that about 14% died during recurrent bleeding from the 2nd to the fourth week. An additional 5% died by the end of the first year of recurrent hemorrhage. The majority of the remaining patients who survived the first year are alive three years after the initial hemorrhage. It is, of course, in the cases that survive the first attack that the physician has the best opportunity to suspect the presence of a cerebral aneurysm and to see that proper localization and therapeutic measures are instigated if at all possible. It is on this basis that Wolfe recommends that patients coming under observation during the four weeks after a spontaneous subarachnoid hemmorrhage be subjected to arteriography and subsequent craniotomy if an aneurysm can be visualized and localized.

Since subarachnoid hemorrhage is the most common manifestation of cerebral aneurysm, we have devoted the major portion of our discussion to that feature of the disease. However, it must not be forgotten that cerebral aneurysms may manifest themselves in other ways, and that they may result in the death of the patient by means other than rupture and subarachnoid hemorrhage.

In order to illustrate the common aspects of cerebral aneurysm with subarachnoid hemorrhage, and also to illustrate some of the unusual ways in which aneurysms may manifest themselves, we present the following case abstracts. Because of the time allotment, these abstracts are very brief, but we believe they will serve to illustrate many of the anatomic points which we think are important.

CASE I

M. K., white female, 65, entered hospital in a semicomatose condition, complaining of severe pain in back of neck and head with nausea and vomiting, all of 45 minutes duration. Patient was in good health until 45 minutes before admission when she was straining to raise a window which was stuck. Had sudden pain in posterior cervical area, radiating to shoulder and occiput. Rapidly became nauseated and vomited several times. On way to hospital became weak and unresponsive. Pulse was 50 per minute with blood pressure of 204/90 on admission. She was cyanotic and had rapidly increasing coma with Cheyne-Stokes respiration. Death occurred 2 hours after onset of illness. Antemortem spinal tap revealed bloody spinal fluid.

The autopsy in this case revealed an aneurysm, probably arteriosclerotic, of the intracranial portion of the left internal carotid artery with rupture and extensive subarachnoid hemorrhage. The findings are illustrated in the following slides.

No. 1—This is base of brain showing blood in subarachnoid space—and marker pointing to small sac like aneurysm of left carotid artery.

No. 2—This is a closer view showing the thin-walled sac with rupture.

The above case illustrates one of the usual manifestations of cerebral aneurysm as does the following case.

CASE II

Miss H., 42, white female was seen in the early evening. Following dinner she had become nauseated, had a severe headache and fainted after vomiting. Temporarily regained consciousness and appeared unparalyzed, but in five minutes had a convulsion. She expired in emergency room of hospital less than one hour later. Past history revealed intermittent headaches, for two months.

The autopsy in this case revealed a massive subarachnoid hemorrhage which was most marked at the base and revealed a small pea-sized aneurysm in the anterior communicating artery in which there was a small opening, which accounted for the hemorrhage. In the absence of inflammation or arteriosclerosis, it was felt that this was probably due to a congenital defect in the vessel wall. The chief findings are illustrated in the next slides.

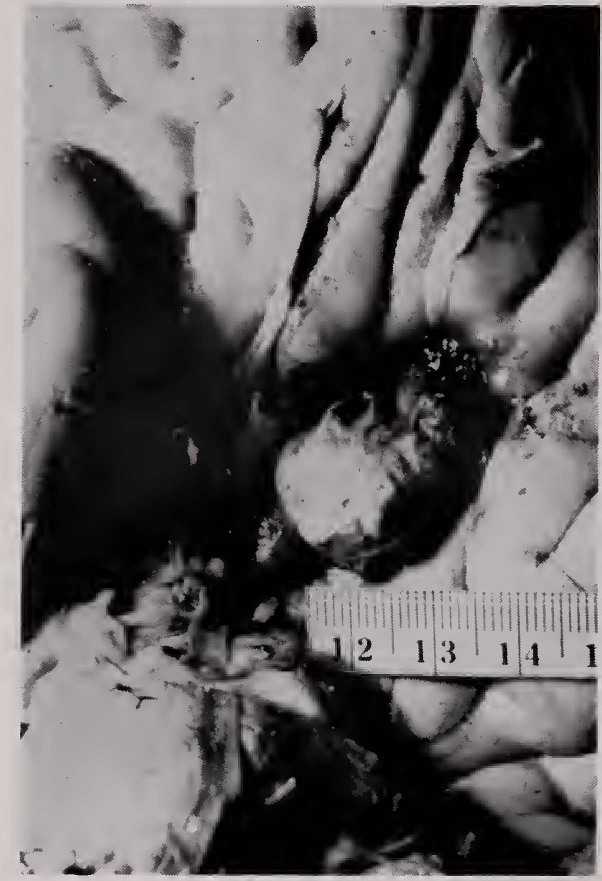

Figure 1

No. 3—This is the Circle of Willis dissected from brain and with marker pointing to aneurysm of anterior communicating artery.

No. 4—A closer view showing the pea-sized sac of aneurysm. The point of rupture is not readily apparent.

A somewhat similar clinical history, but with apparently two hemorrhages occurring in a period of ten days, occurred in a white male, age 43, which we do not have time to present in detail. In contrast to the other 2 cases however, this man's hemorrhage was not subarachnoid, but due to adhesions of the aneurysm sac to base of brain in the region of the third ventricle, his hemorrhage was primarily intraventricular. The findings in this case are illustrated in the following slides.

No. 5—Close view of coronal section of brain showing external surface of aneurysm sac occuring at junction of basilar and posterior communicating arteries as designated by marker.

No. 6—This is another view of same case showing how aneurysm sac ruptured into 3rd ventricle, accounting for the intraventricular hemorrhage.

Much more important and illustrated one of the unusual manifestations of aneurysm is the following case.

CASE III

F. M., white male, 29, was first seen complaining of generalized headache with vertigo of 12 hours duration. Had had intermittent headaches for one month. Was in severe pain holding his head in hands. Had to be restrained to examine. Normal temperature, pulse and respiration. No positive neurological signs. Mild neck rigidity. While arrangements were being made to hospitalize, he suddenly became dyspneic, cyanotic and died in about 25 minutes (18 hours after onset).

His past history obtained after necropsy, revealed that he had suffered a "cerebral accident" elsewhere in 1938, at the age of 21 years. At that time he had had a sudden onset of hemiplegia, signs of cortical irritation, and increased intracranial pressure with bloody cerebral spinal fluid. He had recovered completely in about four weeks time. He had had no further investigation.

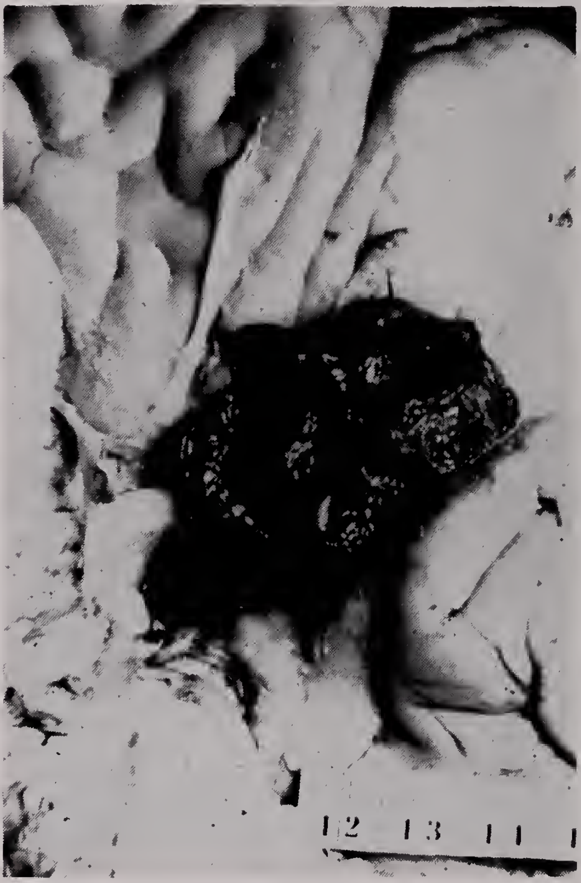

Figure 2

The autopsy in this case revealed no evidence of subarachnoid hemorrhages or hemorrhage of any type, but showed a large unruptured cerebral aneurysm as illustrated by the following slides—

No. 7—Base of brain with large aneurysm, not ruptured, in region of left middle cerebral and anterior cerebral arteries. (Fig. 1).

No. 8—This is a closer view of same lesion showing how it embedded itself in substance of brain—just like a tumor.

No. 9—This is after sac was opened and serves only to prove it an aneurysm. (Fig. 2).

No. 10—The Circle of Willis in this case—removed from brain and showing size of aneurysm in relation to other vessels. (Fig. 3).

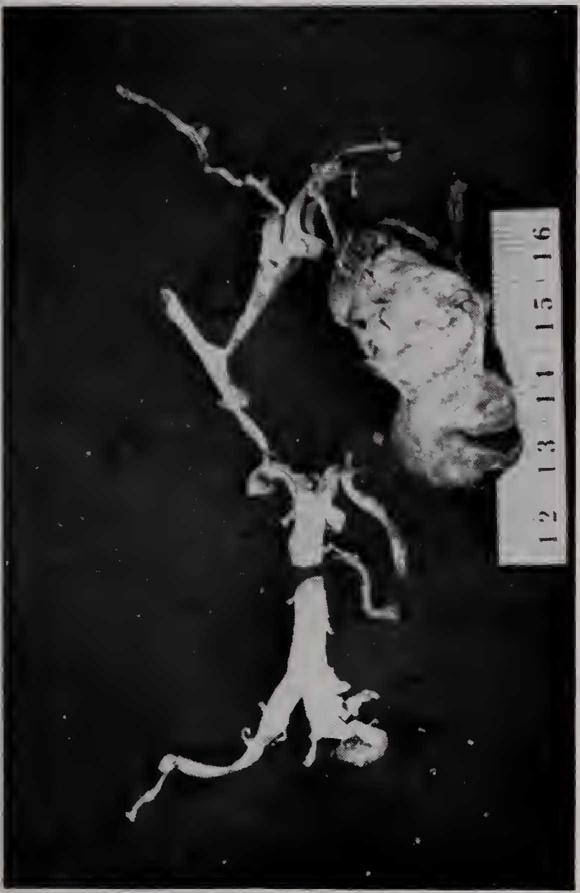

Figure 3

This aneurysm was located in such a position and of such a size as to act as a tumor with pressure sufficient to obstruct the third ventricle and with death apparently due to the tumor mass produced by the aneurysm and not from hemorrhage.

A similar case of an extremely large arteriosclerotic aneurysm of the Circle of Willis which produced death by pressure of the expanding lesion, rather than from hemorrhage, is illustrated only by the following slides (11-12) since we do not have time for the history.

These slides show a tremendous aneurysm involving the entire basilar artery and part of the left vertebral artery.

Finally, we would like to report the anatomic findings in the case of a white male, age 56 from the Lincoln State Hospital. He had been in various State Hospitals at intervals since the age of 19 because of repeated epileptic seizures with subsequent mental deterioration. At autopsy he had a completely sclerotic obliterated aneurysm about 4 cm. in diameter, in the region of the right middle cerebral artery. There was no blood in the lumen of the sac at the time of necropsy and it appeared to have been completely sclerosed and calcified. We can only speculate that this so-called incidental finding was related to the long standing epilepsy and subsequent mental deterioration in this case, but it does represent an unusual example of "healed" aneurysm.

SUMMARY AND CONCLUSION

1. Cerebral aneurysms usually manifest themselves by subarachnoid hemorrhage and in those that do hemorrhage, approximately 25% die in the first attack. It is in those that survive the first attack that it is the responsibility of the physician to recognize the presence of a lesion that may be amenable to surgery.

2. Some aneurysms may produce intraventricular hemorrhage, or may produce symptoms similar to neoplasm by virtue of their size and location. They may in this way, produce death without hemorrhage.

3. The possibility of even large aneurysms becoming thrombosed, obliterated and calcified by natural processes is suggested by our experiences.

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EMERGENCY CALL SYSTEM HAS RAPID GROWTH

Medical societies in 329 communities have established night and emergency doctor call systems, according to a report by the Board of Trustees of the American Medical Association. A survey made in the summer of 1948 had shown only 60 such plans in operation.

"While these plans vary greatly according to the size of the community, they all have the same purpose — to guarantee that the people of the community can obtain a doctor at any time of the day or night, any day in the year," it was stated by Dr. Louis H. Bauer of Hempstead, N. Y., chairman of the Board of Trustees.

"The systems are so efficient that even in New York County, which operates the largest emergency call system in the country, it requires no more than seven or eight minutes to have a doctor on his way to answer a call."

Dr. Bauer added that the board "urges all county medical societies that have not yet established a formal plan for answering night and emergency calls make that a completed project during the coming year."

Infectious Diarrheas: Part III

Some Bacteriological and Epidemiological Aspects

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AMEBIASIS

The causal relationship between Endamoeba histolytica and amebic dysentery was established by Walker and Sellards in 1913. Their work also demonstrated that the frank clinical disease develops in only a small proportion of infected individuals and that many hosts become asymptomatic carriers. Belding (1942) estimates the incidence of infection in the United States to be about 10% of the population. The incidence of infection is related to unsanitary conditions and practices; however, the lowest incidence is in children under five years of age, presumably by lack of exposure.

Sources of infection are carriers, asymptomatic contacts, or chronic convalescent cases, who are passing infective cysts. The mechanism of transmission is usually direct transfer of infective cysts from these sources to the new host through the intermediary of contaminated food or water. The role of foodhandlers, flies and other insects, and fecally contaminated materials in general is readily apparent and their proper control in association with treatment of infected persons constitutes epidemiological control of the disease.

The incubation period of amebiasis is relatively long, ranging between 20 and 95 days. As previously stressed, probably only a relatively small percentage of infected individuals develop clinical symptoms of significance. In severe form, however, the patient may suffer nausea, vomiting, chills, fever, severe abdominal pain, marked diarrhea with blood, pus, and mucus in the discharges, and a variety of generalized symptoms, such as, toxemia, prostration, weakness, etc. The dangerous sequelae are chronic dysentery with extensive scarification of the colon and liver abscess.

Frequently the clinical findings coupled with a trial of specific therapy is highly suggestive but does not in itself constitute a specific diagnosis. Definitive diagnosis may be obtained by identification of characteristic trophozoites in wet preparations from warm diarrheic or purge stools or by identification of the cyst stage in the more formed stools of chronic cases or carriers. Stained smears using the iodine or iron-hematoxylin methods are frequently of assistance in diagnosis. After barium enema, radiographs frequently show characteristic small crateriform lesions in the mucosa of the colon or in old cases may show evidence of fibrosis of the wall of the colon.

PARENTERAL INFECTION

Parenteral infection is a frequent cause of diarrhea in infants and children, particularly among poorly nourished children. Clinically there are two varieties, the first, true parenteral diarrhea, in which the precipitating infection is either bacterial or viral in nature. Otitis media and other infections of the respiratory system are frequent sites of this type of infection. The second variety is observed in infants and children who have suffered true enteral infection and have begun to show a tendency to recurrent attacks of acute diarrhea.

Hurtado and Aballi (1947) from their abundant clinical experiences in Cuba stress that diets deficient in protein and vitamin B complex, particularly niacin, render infants susceptible to diarrhea in the course of various excesses and after infectious processes.

Recognition of this syndrome is possible by ruling out other primary causes of diarrhea or by finding obvious precipitating infection in other portions of the body.

VIRAL ETIOLOGY OF DIARRHEA

Many viral agents are apparently capable of producing a parenteral type of diarrhea; however, the list of viruses which have thus far been shown to directly affect the gastrointestinal tract is much shorter, including the viruses of measles, poliomyelitis, Buddingh and Dodd, lymphopathia venereum, influenza, and possibly the viruses of primary atypical pneumonia.

Diarrheas of viral etiology or presumed viral etiology are not confined to pediatric age groups; however, the largest volume of research has concerned itself with so called "epidemic diarrhea of the newborn." Accordingly our discussion of this phase of infectious diarrhea will evolve about this topic. As we briefly summarize some of these outbreaks, the need of breaking the intestinal-oral or respiratory routes of transmission to halt an epidemic will be obvious, and as a corollary some of the simple and usable bacteriological techniques will be apparent.

As our discussion is to evolve about epidemic diarrhea of the newborn, our first interest naturally concerns itself with the etiology of this syndrome. In most instances the etiology has not been determined with certainty; however, various authors have reported the isolation of the following organisms from individual epidemics — various Shigella and Salmonella species, Klebsiella pneumoniae, gamma hemolytic streptococci, hemolytic Escherichia coli, monilia, Pseudomonas aeruginosa, Proteus sp., alpha hemolytic streptococci, Aerobacter aerogenes, filterable agents, and many others. Review of several of the reported outbreaks will illustrate the nature and epidemiological import of these infections.

Lagozzino (1948) reports two epidemics in infants hospitalized for other reasons than diarrhea. The patients suffered profuse, watery, mucous diarrhea devoid of gross pus and blood with attendant weight loss, dehydration, prostration, and acidosis. The severity of the epidemic is evidenced by the fact that of a total of 25 cases there were four fatalities. Bacteriological studies were negative and no characteristic findings were observed in the cases autopsied. Strict isolation procedures materially affected both outbreaks.

Buddingh and Dodd (1944) report a clinically mild outbreak of diarrhea associated with stomatitis affecting 53 persons with no fatalities. An occasional adult suffered the typical syndrome; however, the majority of cases involved infants under the age of six months. Swabbings from the mouth in 45 cases and from the stool of 12 children produced a viral reaction in the scarified corneae of rabbits. This agent proved to be filterable and could be serially transferred in rabbit corneae. On challenging the virus with convalescent patient's serum, the action of the virus was completely inhibited. An accidental laboratory infection occurred with the production of typical symptoms in an adult. During the epidemic in the nursery, mouth swabbings from 3 of the 4 nurses in charge were found to be positive for the virus and produced typical reactions in rabbit eyes. Similarly mouth swabs from 60 adults more or less in contact with the nursery revealed 2 positive reactors, one of these, an interne, was inadvertently assigned to the nursery and subsequent to his arrival three new cases of stomatitis and diarrhea developed. Again strict isolation techniques halted the epidemic.

Light and Hodes (1943) report six distinct epidemics in three hospitals among newborns and premature infants. Three of these epidemics exhibited high morbidity and mortality. In four of the epidemics, Seitz filtered stool from cases of the disease produced a bloody, mucoid diarrhea with similar clinical characteristics in young calves. Recovery of the calves rendered immunity to the filterable agent. Similarly challenge tests with sera from six babies recovered from the epidemic protected calves against infection. As bacteriological studies were negative, the viral etiology of these outbreaks seems unquestioned.

Lembcke, Quinlivan, and Orchard (1943) report two epidemics among newborns. The first epidemic primarily affected artificially fed infants and significantly opportunity for transmission of infection was shown to be afforded by contamination of nipples and formula. The second epidemic was limited almost exclusively to breast fed infants and in this instance opportunity for transmission of infection was afforded by probable contamination of a common vessel of 4% boric acid used to cleanse the mother's breasts.

Sauer (1947) reviews the epidemic at The Cradle in 1927. In this outbreak there were 86 cases with 27 fatalities. Proteus morganii was believed to be the etiological agent in this outbreak. The interesting feature of this paper is the author's discussion of the development of the so-called Dick individual aseptic technique, which promptly halted the outbreak. A slightly modified form of this technique has since been maintained at The Cradle with no subsequent outbreaks of diarrhea.

Rubenstein and Foley (1947) report 19 individual outbreaks of epidemic diarrhea of the newborn reported in Massachusetts from 1936 to 1945. The clinical syndrome is well documented but more startling are the epidemiological studies carried out. These we believe will illustrate the role of bacteriological control. The authors point out that investigation of nursing techniques and of methods of formula making brought to light many deficiencies. For instance thermometer dips used in two nurseries were subjected to bacteriological examination; the bacterial counts were 44,000 and 7,000,000 organisms/ml. with Escherichia coli the predominant organism isolated. In both nurseries the sterilizing agent was a 1:10,000 dilution of bichloride of mercury which was renewed once every seven or ten days. In several nurseries a common oil bottle served as a means of maintaining contact between infants. Alcohol or bichloride of mercury dips for nurses hands showed 75,000 and 150,000 organisms/ml. in two nurseries studied. Total bacterial counts on formula ready for use in three nurseries revealed counts of 32,000, of 396,000 and of 9,500 organisms/ml. respectively, and in all three instances Escherichia coli and other organisms were isolated from the formula. Comment was frequently made of the inadequate space and understaffing in many of the nurseries studied.

Reports in the literature of epidemic diarrhea of the newborn are legion. The foregoing reports were selected because they are representative of the syndrome described and discussed the diverse etiology and methods of spread of the etiological agents producing this syndrome. The common thread of information running in all of the reports was that bacteriological survey and/or the institution of strict isolation techniques, without regard to previously used techniques in the affected institutions, promptly halted the epidemics. Conversely such epidemics have occasionally occurred in rigidly controlled institutions, the etiological agent presumably spread by means of the respiratory route. It is our belief, however, that standardization of effective techniques for the care of newborn infants will prevent many such outbreaks of diarrhea and further, that if such an outbreak occurs in an institution, prompt bacteriological survey will accomplish much in evaluating potential or actual defects in techniques and thereby aid in the termination of the outbreak.

SUMMARY

Some of the bacteriological and epidemiological factors in infectious diarrhea have been reviewed and discussed. An attempt has been made to place a proper perspective on the relative importance of the various types of such diarrhea. Some clinical material has been included to amplify the discussion. Emphasis has been placed upon the need for correlated action between the clinician and the bacteriologist in the face of an epidemic and in working out the intricate epidemiological factors in infectious diarrhea.

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FATAL EFFECTS OF ANTIHISTAMINES ON CHILDREN

The disastrous effects of an overdose of an antihistamine on young children as a result of accidental swallowing are compiled in a report by two physicians of the University of Michigan Medical School. Their observations serve as a warning to parents to keep these and other potent drugs out of the reach of children.

"The susceptibility of children to the convulsant action of antihistaminic agents is striking and impressive," Drs. James B. Wyngaarden and Maurice H. Seevers of Ann Arbor say in the February 3rd Journal of the American Medical Association. They added that "the mortality rate in infants in whom convulsions develop is very high." Antihistamines are being widely used in treatment of allergic diseases and cold symptoms.

According to the article, there are at least eight known deaths of children under two years of age attributed to these drugs. Five of the deaths were accompanied by convulsions.

Treatment of convulsions from antihistaminic agents in infants has been found to be "none too successful," they said, since treatment is entirely symptomatic as a specific antidote is lacking. Only two cases of recovery from convulsions caused by antihistaminic agents in children under two are known.

Clinico-Pathologic Conference

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FIRST ADMISSION

A 62-year-old white housewife entered the University Hospital complaining of:

1. Intermittent jaundice for 10 to 12 years.
2. Recurrent left lower quadrant pain for 2 years.
3. Tired, weakness, weight loss for 2 years.
4. Bloody stools for 3 months.

Present Illness: The patient has had recurrent attacks of gallbladder colic with jaundice for years. Cholecystectomy six years ago gave no relief. Twenty-two months before admission she had a severe left lower quadrant pain requiring "hypos" for relief. She then remained in bed for one month because of pain and weakness. She has since had recurring episodes of this pain. She has had "piles" for years and has noted blood in her stools for several years. Three months before admission she began having liquid bloody stools 4 or 5 times daily and also began having chills. This lasted for about a month. Bloody stools have recurred; she thinks not associated with the "piles." There has been a 40-pound weight loss in 2 years.

Past History: Hysterectomy and oophorectomy followed by menopause 25 years ago.

Physical Examination: Showed a white female, moderately obese, in no apparent discomfort.

Chest and heart were not unusual. Blood pressure—150/84. There was a large fat apron over the abdomen. The abdomen was tender, especially in the left lower quadrant. No masses were palpable. Pelvic examination demonstrated no pelvic or adenexal abnormality. There were several small external hemorrhoids.

Laboratory: 12 grams Hbg. WBC 4,400; Seg. 61; staff 6; eosin 1; lymph 24; mono 8. Sed. rate .5 mm/hr.

Urine: Sp. Gr. 1.020; Negative for albumin, sugar and acetone; up to 20 WBC per high power field.

Radiograph Examination: Barium enema revealed diverticulosis of lower descending and upper sigmoid colon with narrowing of recto-sigmoid but no definite obstruction.

Hospital Course: After sulfathiazole therapy a resection of sigmoid colon was done, with colostomy. The specimen showed diverticulosis of sigmoid colon. Two months later the colostomy was closed; the post operative course was uneventful except for a persistent small amount of fecal drainage from the wound.

SECOND ADMISSION

The patient was re-admitted 6 weeks later, stating that since leaving the hospital a series of abscesses in the incision site had drained fecal materal. She had felt well and had gained 4 pounds.

Physical examination showed 3 small fistulous openings discharging fecal material. The fistulous tract was dissected and a pinpoint opening in the colon was closed. She recovered promptly and was discharged 10 days after surgery, with a slight sero-sanguinous discharge from the lower angle of the wound.

THIRD ADMISSION

The patient was again admitted after 17 months with the complaint of pain in the abdomen, particularly in the left lower quadrant for 2 weeks' time. There had been fever from 100-102° with chills usually in the afternoon. She had been vomiting a yellowish to greenish sour fluid. The abdomen had been distended for 2 weeks. No change in bowel habits was noted. She described the pain as a constant dull ache with some radiation of pain down the inside of the left leg.

She had had some pain in the abdomen since her earlier admission but it had not interfered with her daily activities.

Physcal examination now showed regular heart tones with faint systolic murmur. B.P. 120/72; abdomen tympanitic, with generalized tenderness most marked in the left lower quadrant. No masses palpable.

Pelvic examination disclosed no tumor masses.

Laboratory Examination: Hbg. 11.4 grams; WBC 7,500; seg 34; staff 39; eosin 1; lymph 17; mono 9. One month after admission the Hbg. was 9 with WBC 6,400; segs 11; staff 58; young 3; lymph 19; mono 9 with toxic granules in neutrophiles.

Urine—Sp. gr. ranging from 1.006 to 1.016; Alb. consistently trace to 1 plus; Plasma proteins were 6.26%.

Course: The temperature spiked to 102°-103° each afternoon, at other times between normal and 101°. A course of sulfadiazine and sodium bicarbonate was started; other therapy was supportive. The patient became gradually weaker, complaining particularly of dull aching abdominal pain. Three weeks after admission it was noted that there was moderate edema of the legs, greater on the left. She became gradually weaker to her death one month after entering the hospital for the third time.

DR. HENRY LENHOFF: The generally good condition of the patient after 2 years of a left lower quadrant pain, tends to rule out malignancy. Likewise, the history of intermittent jaundice of 10 to 12 years duration is not consistent with malignant neoplastic disease. It is unlikely that the history of gallbladder colic associated with jaundice had much to do with the cause of death. I think it is significant that she experienced the severe attack of left lower quadrant pain which required hypodermics for relief, and that she remained in bed for a month because of pain and weakness. It must have been an overwhelming situation. From that time until the time of her first admission in the University Hospital she had suffered the left lower quadrant pain. Also she had had "piles" which at times bled. Approximately 3 months prior to admission she had chills and fever. So far the clinical picture develops into one of an inflammatory lesion, involving the structures of the left lower quadrant of the abdomen. The most likely diagnosis would be diverticulosis of the descending colon with recurrent bouts of diverticulitis. Possibly the massive attack mentioned was caused by the rupture of a diverticulum. The record of the physical examination does not add much to confirm the diagnosis. The blood pressure is not remarkable. The x-ray confirms the original clinical impression of diverticulosis.

On her third admisson the continuing complaint is left lower quadrant pain. The chills, fever, vomiting and abdominal distension with flatulence point to some lesion within the colon. The complaint of radiation of pain down the inside of the left leg is not a common one.

This last admission introduces a new physical finding, namely the systolic murmur at the apex of the heart. The record is not clear enough to judge its character and the nature is hard to determine. It is difficult to re-construct a syndrome which would allow for the development of a heart murmur unless septicemia or endocarditis was present. Some other possibilities include anemia. We note that her blood count had fallen some, also that her blood pressure was lower than on previous admissions. Speaking of ausculation, this examination of the abdomen is a very valuable procedure in the physical examination. It would help us here to know the nature of the bowel sounds, i.e., whether they were the hyperactive ones of mechanical obstruction or whether they were those of an adynamic ileus. Laboratory tests do not help us much at this time. Serum proteins are a little low.

DR. H. C. ELLSWORTH: The films taken during this admission show the colon well filled with barium. There is gas present in the small intestine. We can be certain that these large collections of gas are in the small bowel because the colon is filled with barium. There is also considerable gas in the stomach. The relatively uniform distension of stomach and small bowel makes us think of ileus. Obviously it could not be an obstructive lesion of the distal part of the large bowel since we see its full length filled with barium.

DR. LENHOFF: Is the diaphragm elevated or depressed?

DR. ELLSWORTH: The right and left diaphragms are relatively at the same level. Both lung fields are within normal limits. I would say that there is no significant change in the position of the 2 leaves of the diaphragm.

DR. LENHOFF: During her hospital course we see her temperature following the pattern she described at home — each day rising to 102° or 103°. The course is one of becoming gradually weaker. Her course appears to be the result of an inflammatory pyogenic disease. It is apparent that it developed in the left lower quadrant of the abdomen and the course is characteristic of abscess formation. We have nothing definite as to the localization of the abscess. It does not appear to be subdiaphragmatic or subhepatic, yet I cannot help but suspect that area. The edema of the left leg suggests some venous disease such as phlebitis. We must consider an ascending phlebitis involving mesenteric veins, but this clinical picture is not quite typical. The development of the murmur heard at the cardiac apex plus the septic type of fever does suggest an acute endocarditis, but this cannot be the primary cause of her death. In summary I believe we are dealing with a primary lesion typified by an intra-abdominal abscess probably subdiaphragmatic. I am certain that this is not a neoplastic lesion.

DR. TOLLMAN: The post mortem examination disclosed numerous firm adhesions binding all loops of bowel together. Lying behind the colon on the left side was a large abscess cavity extending from the region of the left kidney downward retroperitoneally across the pelvis and into the thigh. Medially the cervical stump was incorporated into the wall of the abscess cavity. In the upper margin of the abscess a tiny nubbin of kidney tissue was identified attached to a renal artery, but no ureter could be found. Further dissection disclosed a communication between the sigmoid and this abscess cavity. The wall of colon was too necrotic to determine whether a diverticulum had been present. The heart was of normal size with the mitral valve margin rolled and scarred and attached to its surface were some ragged vegetations. Microsopic section shows the vegetation to be relatively active with little tendency toward organization. Numerous rod-shaped bacteria were found. Post mortem blood culture showed Escherichia coli but unfortunately the valve itself was not cultured, and no ante mortem blood cultures had been taken. This meets some, but not all, of the criteria for a specific diagnosis of Escherichia coli endocarditis. Section of the small left kidney mass showed numerous tiny cast filled tubules seen with obstruction of long standing.

The course of this disease has been reconstructed in this way: The complaints of her first admission are related to diverticulosis. Resection of a segement of colon with diverticuli was complicated by development of a fecal fistula which was subsequently resected. After a relatively normal interval of some 16 months there was again perforation of the bowel, with formation of a massive retroperitoneal abscess, extending from the level of the kidney, through the pelvis into the left thigh. In the course of its spread a bacteremia developed with production of a bacterial endocarditis. This massive infection led to her death. The atrophy of her left kidney probably dates back to the hysterectomy 25 years ago.

Tuberculosis Abstracts

DIAGNOSIS OF PULMONARY LESIONS DISCOVERED BY MASS ROENTGENOGRAPHIC SURVEY

PART I

Dumont Clark, M.D.; Carl W. Tempel, M.D., and Kenneth D. A. Allen, M.D., The Journal of the American Medical Association, July 15, 1950.

The technic of mass roentgenography of the chest uses a small film that is not diagnostic, but indicates abnormalities which must be identified by further studies including a 14x17-inch roentgenogram.

The identification of a pulmonary lesion is no different from that of a diseased condition elsewhere. The history is of the greatest importance, especially that part dealing with contact with tuberculosis, the regions of the country in which the patient has resided, his occupations, age, sex, race and family history.

It is to be understood that the radiograph should be of good detail, optimum contrast and proper density. Evidence of early disease can be obliterated from the roentgenogram of an infected case, or can be simulated in a normal chest, by poor films. Interpretation of the radiograph is the important item.

Use of a fluoroscope is not only completely inadequate for the detection of early disease but can be a menace by producing a false sense of security.

The physical examination of the chest and the lungs is disappointing in most chronic pulmonary diseases, especially in the discovery of an early lesion. However, an evaluation of the circulatory status of the patient by physical examination may be of value. Enlarged external lymph nodes, by their location, number and consistency, may indicate carcinoma, sarcoidosis, tuberculosis, a blood dyscrasia or lymphoma. A biopsy of the node may then settle the diagnosis.

The differential diagnostic value of the temperature, pulse, and respiratory rates is not great. A rise in temperature may indicate an infectious process. Changes in the pulse and respiratory rates, in the blood cell count, the sedimentation rate, and urinalysis are common phenomena whose significance is well known.

SPECIFIC DIAGNOSTIC PROCEDURES

Three different skin tests are commonly used, the tuberculin, the coccidiodin and the histoplasmin. If properly performed, these tests are reliable for the disease in question. With few exceptions, a repeated negative reaction rules out the disease in question.

If the patient with a pulmonary lesion has sputum, a twenty-four hour specimen should always be examined for tubercle bacilli. Without sputum, it will be necessary to culture the fasting gastric contents for tubercle bacilli. Nearly all pulmonary lesions are suspect for tuberculosis primarily. When establishing a diagnosis of tuberculosis, the laboratory should culture the sputum for tubercle bacilli, or inoculate guinea pigs, as well as examine smears. Smears of gastric contents have little value because acid-fast bacilli other than the tubercle bacilli are common.

Sputum which is to be cultured for fungi should be coughed up after the patient rinses out his mouth with water or preferably a dilute solution of alcohol and water to remove the frequent mouth contaminants. Sabouraud's mediums, or the ordinary blood agar mediums are generally used for culture. The identification of the fungus is a matter for the expert. It is difficult to culture pathogenic fungi from the stomach.

Carefully obtained samples of sputum can be studied by the Papanicolaou technic for malignant cells, which if definitely identified, are diagnostic of bronchogenic carcinoma. All patients with suggestive bronchogenic carcinoma should have a bronchoscopic examination.

A Wassermann or Kahn test of the blood should be made for every patient. Cold agglutinins are found in the serum of most patients with atypical pneumonia after the first week. Antibodies for fungus antigens are frequently present in the blood during the active stages of the infection.

Bronchoscopic examination is a highly specialized technic which should be done only by the expert. It is used to secure biopsy sections, to observe the lumen of the bronchi, and to aspirate bronchial secretions. It can be done a few days after hemoptysis; it is used freely in patients with any stage of pulmonary tuberculosis, and age is not a factor. A seriously ill patient should not, as a rule, undergo bronchoscopic examination.

The bronchogram, or roentgenogram made after the installation of radiopaque oil, usually iodized oil, into the bronchial tree, is used in the diagnosis of bronchiectasis. Iodized oil, which may be retained for long periods, may obscure lesions or simulate disease in a normal lung.

It is occasionally recommended that streptomycin be given to a patient who has an undiagnosed lesion of the chest. If, under this treatment, the lesion improves in two or three months, this suggests that it is tuberculous in nature. Its use in this manner has little to commend it.

Pneumoperitoneum and pneumothorax are generally used as therapeutic measures. A pneumoperitoneum will show the position of the diaphragm. It will also show whether a lesion at the base of the lung is above or below the diaphragm. Pneumothorax has been used to delineate a pulmonary lesion but it is rarely used for this purpose now.

Fluoroscopic examination of the esophagus, posterior mediastinum, and stomach while the patient swallows a barium suspension can give important information especially when diaphragmatic hernia is present.

Thickened pleura and pleural fluid are often indistinguishable when the above diagnostic procedures are used. If fluid is present, it generally can be found with a needle and should be cultured for the tubercle bacillus and other organisms. With the development of the cytologic technic for the detection of bronchogenic carcinoma, there is little need for needle biopsy of chest tumors.

The Valsalva procedure and the angiocardiogram are mentioned only for the sake of completeness. Both are used to detect an arteriovenous shunt in the lungs although the angiocardiogram has other uses.

Exploratory thoracotomy is resorted to when all the previously discussed diagnostic procedures fail to determine the nature of a pulmonary lesion. The surgical procedures accomplished after the lung is entered may be simple biopsy, removal of a segment of the lung, lobectomy, or pneumonectomy, depending on the nature of the lesion and the judgment of the surgeon. The decision to explore should be made with the advice and help of the thoracic surgeon.

NOTE: This is the first of two abstracts dealing with the diagnostic procedures and differential diagnosis of pulmonary lesions found either on the small film used in mass roentgenography of the chest or on the diagnostic roentgenogram.

The second part of this paper will be used to prepare the June, 1951 issue of Tuberculin Abstracts.

RHEUMATIC FEVER KILLS MORE GIRLS THAN BOYS

The death rate for girls suffering from rheumatic fever and heart diseases is slightly higher than the mortality rate for boys, a recent study revealed.

The study, made by Dr. George Wolff of Washington, D.C., also disclosed the fact that death rates in the Middle Atlantic and Western Mountain regions average slightly higher than those in the rest of the country. A report of his findings is carried in the March 10 Journal of the American Medical Association.

The Nebraska State Medical Journal

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Subscription $2.50 Per Year. Single Copies 35c Each

The Publication Board does not assume responsibility for opinions expressed in original articles published in this Journal.

Manuscripts should be typewritten, double-spaced, and the original, not the carbon, submitted.

Reprints should be ordered from the printer, The Huse Publishing Co., Norfolk, Nebraska.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

Vol. 36 May No. 5

THE A.M.A. TWELVE POINT PROGRAM

1. Creation of a Federal Department of Health of Cabinet status with a Secretary who is a Doctor of Medicine.
2. Promotion of medical research through a National Science Foundation with grants to private institutions which have facilities and personnel sufficient to carry on qualified research.
3. Further development and wider coverage by voluntary hospital and medical care plans to meet the costs of illness, with extension as rapidly as possible into rural areas.
4. Establishment in each state of a medical care authority to receive and administer funds with proper representation of medical and consumer interest.
5. Encouragement of prompt development of diagnostic facilities, health centers and hospital services, locally originated, for rural and other areas.
6. Establishment of local public health units and services.
7. The development of a program of mental hygiene with aid to mental hygiene clinics in suitable areas.
8. Health education programs administered through suitable state and local health and medical agencies to inform the people of the available facilities and of their own responsibilities in health care.
9. Provision of facilities for care and rehabilitation of the aged and those with chronic disease and various other groups not covered by existing proposals.
10. Integration of veterans' medical care and hospital facilities with other medical care and hospital programs and with the maintenance of high standards of medical care.
11. Greater emphasis on the program of industrial medicine.
12. Adequate support with funds free from political control, domination and regulation of the medical, dental and nursing schools and other institutions necessary for the training of specialized personnel required in the provision and distribution of medical care.

Organization Section

MEDICAL-PRESS-RADIO CONFERENCE

The more than 125 physicians, radio and newspapermen who attended the second Medical-Press-Radio Conference at the Cornhusker Hotel in Lincoln April 6 heard thorough and interesting discussions on several medical-lay subjects, including the financial problems faced generally by the nation's medical colleges.

This second meeting with the state's publishers and radio personnel was held in conjunction with the annual conference of county society presidents and secretaries. It was again sponsored by the Public Relations Committee of the Nebraska State Medical Association. One of the primary purposes of the meeting was to continue building the fine relationships that now exist between the three professions. Both physicians and newspapermen heralded the accomplishments in this direction.

Dr. Harold Lueth, Dean of the University of Nebraska Medical School, graphically portrayed the need for greater financial support to the medical school. He pointed out that the same is true of almost all medical schools. To illustrate how the costs of training physicians has risen in the past 30 years, Dr. Lueth stated that the budget last year for the biochemistry department alone exceeded the entire budget for the medical school in 1920. He went on to relate that the many advances in medicine have materially increased teaching costs.

Several methods were discussed as to how medical schools can get the necessary funds, not merely to maintain existing teaching facilities, but to meet the demands of the accelerated programs they have been required to undertake. In this connection, both state and federal funds were brought out.

Dr. Joseph Lawrence, Director of the A.M.A.'s Washington Office, asserted that medical schools should not accept federal funds because it would invariably entail federal control and regulation. He stated that a previous Supreme Court opinion would virtually assure such domination.

Dr. Percy J. Carroll, Dean of the Creighton Medical School, declared that many or all of the nation's 42 privately endowed medical schools could not continue to operate without some kind of financial help. It was his opinion, however, that medical schools should not accept federal aid unless they are assured full freedom to select their own students and curriculum.

It was unanimously agreed that the medical school needs more money. It is the opinion of the Nebraska State Medical Association that these funds should come from state appropriations and private endowment.

Other speakers who appeared on the program and their topics were: Mr. Edward Gillette, "Status of Civil Defense;" Mr. Virgil Sharpe, "The Educational Role of Radio in Medicine;" Dr. Roy Whitham, "The Doctor Draft;" Dr. Floyd Rogers, "Local Public Health Councils;" Mr. James E. Lawrence, "The Physician in Community Affairs;" Dr. George Underwood, "Public Health in Nebraska;" and Mr. Art Gardner, "Socialism—Our Common Enemy."

Governor Val Peterson, Lt. Gov. Charles Warner and members of the legislature were special guests of the association at the noon luncheon, presided over by President C. H. Sheets.

MATERNAL AND INFANT CARE FOR SERVICEMEN'S WIVES

Congressman Daniel J. Flood (D.-Pa.), has introduced a bill providing for an emergency maternal and infant care program which would allow up to $100 toward childbirth medical expenses of servicemen's wives.

The bill states that ". . . the wife of any member of the Armed Forces . . . who incurs expenses in connection with childbirth (including expenses for prenatal and postnatal care) and for whom the payment of such expenses is found to constitute undue financial hardship, shall upon application be entitled to receive, in payment or reimbursement of such expense, such amount not exceeding $100 as may be necessary to alleviate such financial hardship."

Under the bill's provisions, the program would be run by the military services. Each of the service secretaries would jointly prescribe regulations for the payment or reimbursement of expenses to recipients.

This bill varies considerably from the controversial EMIC program which was in operation during World War II. That plan permitted the Children's Bureau to make grants-in-aid to state health departments. The health departments then paid hospitals on a cost basis formula for expenses incurred by wives of military personnel in the four lowest enlisted ranks.

A flat payment of $50 was established for physicians for delivery and prenatal and postnatal care. Under the Flood bill, the mother would make all arrangements with hospital and physician and then be reimbursed by the government up to $100.

News and Views

Dr. Juul C. Nielsen submitted his resignation as superintendent of the Hastings State hospital to the board of control effective June 1.

He accepted a position as director of the Indiana council of mental health and superintendent of the Carter Memorial hospital at Indianapolis.

Dr. Nielsen said the new position pays $15,000 a year, plus maintenance, as compared with $7,500 plus maintenance at Hastings.

He has been at Hastings since 1933.

CAMP FOR DIABETIC CHILDREN

A camp for diabetic children was conducted in 1940 and 1941. This camp was to a large extent an individual effort. All concerned thought it was successful. The first year we had 12 children, the second 20. It doubtlessly would have been continued except for the war emergency. Following the war it was felt by the members of West Central Diabetes Association that a camp should be re-established and that the interest in this camp should be on a broader basis.

This summer camp will be operated by the Springdale Camp Association which is incorporated and is organized to sponsor a camp for diabetic children. This organization is the official camp of the West Central Diabetes Association. It has been endorsed by the Nebraska State Medical Association. Other participating groups are: Girl Scouts, Boy Scouts, Nebraska State Health Department and the Junior Chamber of Commerce, Creighton University Medical School and University of Nebraska Medical College. The Junior Chamber of Commerce was active a number of years ago and raised several thousand dollars for this purpose. At the time we hoped that enough money would be raised to build a separate camp. However, building cost and a decreased interest on part of the Junior Chamber of Commerce made this impossible.

Further study indicated that it would be best to operate a camp for diabetics for a relatively short period of time, consequently a separate camp would not be practical. Meanwhile the Girl Scouts already had built an excellent camp near Nebraska City. This is known as Camp Catron and was operated during the past season. Springdale Camp Association has negotiated a contract with girl scouts for leasing Camp Catron for a two week period in June. During this time we will have use of the complete camp and our present lease extends for several years. The camp is situated on a 60-acre plot of ground and consists of a central dining hall and kitchen with four widely separated units each of which have adequate facilities to accommodate 15 campers plus necessary personnel. This year we will accept only 30 campers, 15 boys and 15 girls. It seems practical to take both boys and girls at the same time because of the widely separate units.

The Nebraska State Department of Health is cooperating in several ways but in particular in their assignment of Miss Anna Smrha who is a food director of the Department of Health. Miss Smrha is being given three weeks of absence by the Health Department so that she can take over this work for our camp. We are unusually fortunate in having the services of a person who has had as much experience and ability as Miss Smrha. We have been fortunate in obtaining the interest of Dr. Ruth Leverton who will serve as diet therapeutist. The University of Nebraska has given Dr. Leverton a two weeks leave of absence for this work. The Boy Scouts and Girl Scouts will assist in planning the non-medical activities of the camp and will assist in obtaining counselors to carry out the work. Both medical schools have been consulted in regard to our activities. Dr. Pleiss is on our board of directors representing Creighton University, and Dr. Crofoot, University of Nebraska. Dr. Margolin, president of West Central Diabetes Association, will serve in an advisory capacity. Our board of directors consists of Mr. Charles Roper of Lincoln, President; Mr. Herman Siefkes of Lincoln, Secretary and Treasurer; Dr. Crofoot, Vice President. Mrs. Frerichs is liaison member between our group, and the Girl Scouts, and Dr. Rogers.

We will open camp this year on June 10th and close on June 23. Our charge will be $25.00 a week, that is $50.00 for the two week period. This is the amount which will pay for the operation of the camp, excluding the rent. We anticipate that children unable to pay this amount will be taken, consequently the camp will operate at some loss.

The camp will be primarily a school, and secondarily, a place where diabetic children can make the first break from their mother's apron strings. It will acquaint these children with others who have diabetes, as well as allow them the usual camp activities which have largely been denied them in the past. We shall have at the camp a kitchen force, a graduate nurse and an interne, who is a graduate of one of the medical schools. It is anticipated that one of the doctors will visit the camp each day and probably all of us will be there on the first day when we anticipate that these children should be examined, diet prescriptions made, insulin dosage established, etc.

I would like to add that we have very few diabetic camps in the United States. As far as I know, this camp will be set on the broadest foundation of any of them. In other words, this camp is a community effort. We tried to draw in as many interested groups as possible and it may serve as a pattern for the solution of a problem which has been rather difficult here and elsewhere.

Application blanks may be obtained by writing Springdale Camp Association, 605 Federal Trust Building, Lincoln, Nebraska.

F. L. ROGERS, M.D.

WHAT THE PUBLIC THINKS AND HOW

The following is a clipping from a recent item in the Public Pulse of the Omaha World-Herald:

> Omaha: Recently I received a prescription that called for aureomycin. Before the druggist filled it he asked if I knew how much it would cost. I replied I had already mortgaged my home to get it. He laughed. Sixteen capsules cost $9. My gripe is this: if it is so scarce or precious, or both, why put it in chicken and hog feed? You don't believe it? Then listen to a noonday radio program when it's advertised. Is livestock more important than people? Everytime I take an old prescription to be refilled it costs more than before. I think Kefauver better investigate.

I don't like socialized anything. I wouldn't vote for socialized medicine, but some people better watch out or they will bring it on themselves. L.A.M.

The Nebraska Chapter of the American Physical Therapy Association held its February meeting in Lincoln. The main item on the agenda was the election of officers to serve for the next two years. The following were elected:

President—Mrs. Mary Lindball, Omaha.

Vice President—Dale Renaud, Lincoln.

Secretary—Mrs. Betty Soder, Omaha.

Treasurer—Miss Avis Bishop, Lincoln.

The American Physical Therapy Association is the professional organization of qualified Physical Therapists in the United States and was founded in 1921 by a group of World War I Reconstruction Aides. Their object is the promotion of art and science of medicine through an understanding and utilization of the functions and procedures of Physical Therapy. Working only under the direction of a qualified physician, this is carried out in prevention, treatment or alleviation of human ailments.

At present, forty-three states, the District of Columbia, Hawaii and Porto Rico have local chapters. The Nebraska chapter was organized in 1946 with five members. There are 24 active members today.

The next meeting will be held in Grand Island on May 5.

AMERICAN CONGRESS OF PHYSICAL MEDICINE

The American Congress of Physical Medicine will hold its twenty-ninth annual scientific and clinical session September 4, 5, 6, 7 and 8, 1951 inclusive, at the Shirley-Savoy Hotel, Denver, Colorado. Scientific and clinical sessions will be given on the days of September 4, 5, 6, 7 and 8, 1951. All sessions will be open to physicians and other professional personnel. In addition to the scientific sessions, the annual instruction seminars will be held September 4, 5, 6, and 7. These seminars will be offered in two groups. One set of ten lectures will consist of basic subjects and attendance will be limited to physicians. One set of ten lectures will be more general in character and will be open to physicians as well as to therapists, who are registered with the American Registry of Physical Therapists or the American Occupational Therapy Association. Full information may be obtained by writing to the American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2, Illinois.

The Woman's Auxiliary

The Lancaster Medical Auxiliary met for a 1 o'clock luncheon at the University Club, April 2nd.

At the business meeting, the following officers were elected for the coming year: President, Mrs. Lynn Sharrar; Vice President, Mrs. Maynard Wood; Treasurer, Mrs. Robert Hillyer. The Auxiliary again decided to place "Today's Health" in the city schools.

Following the business meeting, there was an afternoon of bridge and Canasta.

MRS. C. K. ELLIOTT,
Publicity Chairman.

The Scotts Bluff County Medical Auxiliary met at the Scottsbluff Country Club, March 13th at 6:30 p.m. Sixteen members and seven guests were present. A letter from Mrs. Glenn D. Whitcomb, State President, was read. Plans for the benefit dessert, which will be given April 2 at the Country Club, were discussed. Members brought tea towels or hand towels to be used for table prizes. The Scottsbluff and Gering drug stores donated door prizes. It was decided that 60 tables at least must be planned for. Mrs. Stephanie Hanna agreed to take over the chairman's duties during Mrs. Gridley's absence. The meeting was adjourned.

MRS. C. N. SORENSEN,
Publicity Chairman.

Mrs. C. E. Abbott of Minden was the speaker for the Woman's Auxiliary to the Adams County Medical Society at a Wednesday evening meeting at the Hastings State Hospital. Her topic was "Medical Legislation."

The auxiliary met following a dinner with members of the medical society. During the business meeting, Mrs. Carl Gouldman, president, stressed the importance of study of medical education and of taking an active part in the civil defense program. It was reported that four auxiliary members were hostesses at the Red Cross blood center this week, with Mrs. E. O. Foote as hostess chairman, and that three members were blood donors.

Another report showed that 24 papers had been written by high school seniors in and near Hastings on the topic "Medicine's Role in Preserving the American Way of Life," and that judges would select the best to enter in the state auxiliary contest.

MRS. L. W. RORK,
Publicity Chairman.

Mrs. Glenn D. Whitcomb, State President, was guest speaker at a regular meeting of Tri-County No. 3 Auxiliary at Grand Island on April 11th.

MRS. G. KENNETH MUEHLIG.
State Publicity Chairman.

BUY U. S. DEFENSE
☆ ☆ BONDS ☆ ☆

NEBRASKA STATE DEPARTMENT OF HEALTH

NOTICE TO PHYSICIANS

SUBJECT: RAT POISON

A new type of rat poison has recently been introduced in the United States. Its action is quite different from those previously used. It is also unique in that it has a specific antidote, namely, Vitamin K.

THE PRODUCT: WARFARIN

Warfarin is a coined generic name given to a compound that has very active anticoagulant properties. It is 3-(a-acetonylbenzyl)-4-hydroxycoumarin. This 4-hydrozyciynarin anticoagulant acts similarly to the widely used drug, Dicumarol. Its capacity to produce hypoprothrombinemia is much greater than Dicumarol. When the product is ingested by rats and mice over a period of 4 to 10 days, its anticoagulant action destroys them.

THE ACTION OF WARFARIN

In a single large dose the compound acts on the liver to lower the prothrombin level of the blood. A single dose even though large, does not cause hemorrhage. When multiple doses of this poison are taken over a period of days in sufficient amounts to lower the prothrombin level below the critical point, hemorrhage sets in. This hemorrhage occurs in the minute capillaries throughout the body. The rodent dies after 4 or 5 days feeding due to general internal hemorrhage in many organs. Under similar conditions warfarin can cause hemorrhage in almost any member of the mammalian group.

ACCIDENTAL POISONING

The compound warfarin is used in rodent baits of corn meal, oatmeal and other commonly used food materials. Warfarin is present in these foods at a 1 to 4000 level by weight. Bait stations are set out containing 2 ounces to a pound of bait. They are replenished daily until all feeding stops. Should a person consume a large portion of the bait in one day a slight lowering of the prothrombin level of the blood would occur. If the ingestion of the bait were repeated for several days, such ingestion would lead to hemorrhage. This hemorrhage would show as petechiae, as gingival bleeding, as frank hemorrhage in the urine and where large continuous doses of warfarin bait are consumed, general hemorrhage would result.

THE REMEDY

When the warfarin bait is known to have been taken once by a human, the individual involved should be placed under observation for 24 hours. Feed the patient milk. When warfarin bait has been taken several times in the course of 2 or more days, intravenous Vitamin K in large doses should be given. Menadione, Vitamin K_1, natural Vitamin K and the water soluble forms of menadione are all suitable for use as antidotes. There are available 64 milligram ampules of Vitamin K (water soluble) that are being used successfully in cases of overdosage of Dicumarol. If natural Vitamin K is available this may be given orally at the same time in doses up to 100 milligrams. A second ampule may be given several hours later. The hemorrhagic condition would in all probability be brought under control by this treatment. If the patient has taken considerable amounts of warfarin bait over a period of days and then shows frank hemorrhage, immediate fresh whole blood transfusion is indicated along with the administration of massive doses of Vitamin K. The usual transfusion technique and precautions should be followed. Unlike other rodenticides there is no permanent damage from the ingestion of sub-lethal doses of warfarin for the reason that warfarin leaves little or no residue in the body.

OCCUPATIONAL HAZARD

So far as is known from the extensive industrial experience with warfarin and chemically related compounds, there is no occupational hazard from inhalation, skin absorption, corneal obsorption or any industrial allergic manifestations.

MEDICAL HISTORY

Warfarin was discovered in the laboratories of Dr. Karl Paul Link of the Biochemistry Department of the University of Wisconsin. The original work on Dicumarol and its use in the prophylaxis and treatment of thrombosis led to the discovery of this anticoagulant rodenticide. Dr. Link's work and the work of many scientists since that discovery have shown the favorable action of Vitamin K-active substances in overcoming the anticoagulant effect of warfarin (in animals) as well as of Dicumarol and other related anticiagulants (in both humans and animals).

TUBERCULOSIS DEATH RATE DECLINES

For the first time in history, Nebraska's death rate from tuberculosis fell below 10 per 100,000 population, during the year 1950, it was announced by Dr. E. A. Rogers, Director of the Division of Tuberculosis Control of the State Department of Health.

A provisional estimate places the rate at 8.2 per 100,000, as compared with 12.2 for the previous year. This represents a decline in the death rate of 33% in one year, which is equal to the percentage decline in the preceding 13 years, Dr. Rogers pointed out.

Expressed in numbers, it means a saving of 49 lives in 1950 as compared with the 1949 deaths from tuberculosis. This unprecedented downward trend is an indication that modern tuberculosis case-finding, treatment and education methods are beginning to "pay off," according to Dr. Rogers. Case-finding by mass chest x-rays surveys and other methods helps to find cases early, when treatment is effective.

Modern treatment, using drugs such as streptomysin for the favorable cases, saves lives and restores patients to health. Education makes both patient and doctor "tuberculosis conscious" and leads to earlier diagnosis.

Last year, the State Health Department, with the help of the Nebraska Tuberculosis Association, its local affiliates, and other interested organizations, took approximately 125,000 miniature chest x-rays in its survey activities throughout the state. The figure for 1951 is expected to reach 150,000.

NOPHN REGIONAL CONFERENCE

The Omaha Visiting Nurse Association and the Nebraska State Organization for Public Health Nursing were co-sponsors for the Regional Conference on Public Health Nursing held at Hotel Fontenelle, April 4-6, 1951. One hundred and twenty-five attended from thirteen midwest states.

There were four such conferences planned by the National Organization for Public Health Nursing. The other centers were Providence, Rhode Island, Portland, Oregon, and New Orleans, Louisiana.

The subjects discussed were:

"More Effective Public Health Nursing Through Better Understanding of Human Behavior."

"The Specialized Consultant in Public Health Nursing."

The Metropolitan Insurance Company's Visiting Nurse Service to policy holders is being withdrawn, effective January 1953. This makes it more important than ever that nursing be included in medical care plans. The Nebraska State Nurses Association has appointed a committee to study and investigate the possibilities of such a plan in Nebraska.

At the National level, there have been six nursing organizations. Now, a reorganization plan is in motion for the establishment of two organizations, the American Nurses' Association and the National League for Nursing Education.

In keepnng with these changes, the Nebraska Nurses voted to dissolve the SPOHN and form a section in the Nebraska State Nurses' Association. It was the general concensus that public health nurses should expend their efforts in the Nebraska Public Health Association where they have a splendid opportunity to work with other groups of people interested in public health.

Know Your Blue Shield Plan

Physicians attending the Annual Meeting of the Nebraska State Medical Association are cordially invited to visit the offices of the Blue Cross-Blue Shield Plans at 518 Kilpatrick Building.

Mr. Richard C. Wiebe, Hospital Relations Representative for the Blue Cross-Blue Shield, has been given the additional assignment of Physicians Relations Representative. While making his semi-annual tour of hospitals, he will call on members of the Blue Shield Liaison committees to assist with their educational and promotional program.

Reminder: Always use Standard Nomenclature, as shown in the Schedule of Benefits, when making out medical reports for Blue Shield services. Failure to do so slows up the processing of claims and increases administrative costs.

Three county medical societies, Adams, Garden-Keith-Perkins, and Southwest, recently sponsored newspaper advertisements officially recommending Blue Cross and Blue Shield. Such public endorsement by the medical profession will promote wider public acceptance of the non-profit Plans for prepaid health care.

Doctors and their families need Blue Cross-Blue Shield, too. Any physician and the members of his office staff may join as Direct Pay members, on a quarterly, semi-annual or annual basis. If there are four or more employees on the doctor's payroll, and the group enrollment quota is met, an Employee Group can be organized. Since Group rates are lower than Direct Pay dues, it would be to the advantage of a doctor's employees to form a group if possible.

PERSONAL NEWS ITEMS

Dr. G. P. McArdle attended a meeting of the Case Procedures Committee of the Blue Shield Commission in Chicago on April 21.

Attending the Annual Meeting of Blue Cross-Blue Shield Plans in Biloxi, Miss., April 15-19 were: Dr. E. W. Bantin, Dr. W. W. Carveth, Dr. G. P. McArdle, Dr. O. A. Neely, Dr. A. J. Offerman and Dr. D. B. Steenburg.

NEBRASKA MEDICAL SERVICE

CASE REPORT — MARCH, 1951

Number of Services Rendered	4,155
Females	2,503
Males	1,652
Subscribers	1,521
Dependents	2,634
Average cost per service for March	$31.41
Number per thousand receiving services during March	32

ENROLLMENT SUMMARY — MARCH, 1951

Groups enrolled during March	51
Groups cancelled during March	15
Number of active groups, April 1, 1951	3,044

	Subscribers	Dependents	Participants
Membership, March 1, 1951	62,710	87,167	149,877
Additions	1,359		
Less Terminations	882		
Net Gain	477		
Membership, April 1, 1951	63,187	87,830	151,017

STATEMENT OF INCOME AND EXPENSE

March 31, 1951

	March	3 Months to date
Income:		
Dues	$148,918.64	$438,066.25
Enrollment Fees	1,230.00	3,738.00
Total Earned Income	$150,148.64	$441,804.25
Claim Expense:		
Claims Paid	$130,557.50	$354,055.00
Less:		
Unreported, 2-28-51	117,263.62	128,517.12
Pending, 2-28-51	13,579.00	1,944.00
Plus:		
Unreported, 3-31-51	128,019.34	128,019.34
Pending, 3-31-51	3,818.50	3,818.50
Claims Incurred	$131,552.72	$355,431.72
Administrative Expense:		
Collection Expense	$ 6.50	$ 200.03
Professional—Medical	250.00	750.00
Auditing Expense	840.00	840.00
Advertising—B. S. Only	231.73	360.33
Printing	1,652.10	4,386.85
Office Supplies	------	23.25
Postage	------	134.00
Dues	156.32	457.06
Taxes and Licenses	661.55	1,089.36
Payroll Taxes	6.25	18.75
Payment to B. C.—		
Regular	12,833.75	35,616.51
Advertising	1,006.95	2,109.50
Bonus Expense	300.00	900.00
Conferences and Meetings	542.93	739.03
Salary—Secretary	416.66	1,250.00
Miscellaneous	------	24.00
Total Administrative Expense	$ 18,904.74	$ 48,898.67
Gain or Loss from Underwriting	$ — 308.82	$ 37,473.86

Miscellaneous Gain or Loss Items:		
Plus—		
Miscellaneous Income	------	460.25
Interest on U.S. Bonds	208.34	208.34
Less—		
Increase in Maternity Reserve	9,633.15	9,843.30
	$—9,424.81	$—9,174.71
Net Transfer to Surplus	$—9,733.63	$ 28,299.15
Surplus, 2-28-51 and 12-31-50	$161,359.55	$123,326.77
Surplus, 3-31-51	$151,625.92	$151,625.92

BALANCE SHEET
March 31, 1951

Assets:		
Cash in Banks	$175,643.77	
Premiums in Process of Collection	16,876.70	
U.S. Bonds	384,950.50	
Accrued Interest on U.S. Bonds	3,201.87	
Total Assets		$580,672.84
Liabilities, Reserves and Surplus:		
Accounts Payable, Blue Cross	$ 13.890.70	
Accounts Payable, Monthly Invoices	3,179.50	
Accrued Payroll Taxes	228.90	
Claims Reported but Unpaid (Pending)	3,818.50	
Unearned Premiums	113,624.98	
Total Liabilities		$134,742.58
Reserves for:		
Unreported Claims	$128,019.34	
Maternity Care	163,935.00	
Bonuses	850.00	
Collection Losses	1,500.00	
Total Reserves		$294,304.34
Unassigned Surplus		$151,625.92
Total Liabilities, Reserve, Surplus		$580,672.84

Deaths

Roy W. Fouts, M.D., Omaha. Born in Iowa, 1885. Graduated from the College of Physicians and Surgeons in Chicago and the School of Medicine of the University of Illinois, in 1909. Practiced in Dawson and Falls City in the early twenties when he moved to Omaha, on his return from the U.S. Army Medical Corps following World War I. Dr. Fouts was one of the most active leaders in the history of Nebraska medicine. Devoted to the activities of the medical profession through his individual efforts and through the many offices he held. He was past president of the Omaha Douglas County Medical Society. In 1922 he was elected delegate to the House of Delegates and served in that office until 1945. He was Vice Speaker to the House of Delegates of the American Medical Association from 1936 to 1946 when he was elected speaker of the House. In 1948 following his resignation as speaker, he was elected Vice President of the American Medical Association. He was a member of the Radiology Society of North America, and the American College of Radiology. He was certified by the American Board of Radiology. At the time of his death he was professor of forensic medicine in economics at Creighton University School of Medicine. Died March 27, 1951. Surviving are his wife and two sons.

H. D. Myers, M.D., Howells, Nebr. Born Anamosa, Linn County, Iowa, Nov. 2, 1878. Moved with his parents to Dodge, Nebraska in 1884. Member of the first class to graduate from Dodge High School in 1894. After starting his higher education at Gates College, he transferred to the University of Nebraska and graduated from that institution in 1898 with an A.B. degree. After teaching school for a short time he decided to become a doctor and enrolled at Drake University in Des Moines, Iowa. He graduated in 1906 and located in Howells, where he practiced successfully for 45 years.

Dr. Myers was active in civic and professional affairs. He was chairman of the Colfax County Red Cross Chapter and chairman of the Howells Board of Health. He had been a member of the Howells School Board off and on for 25 years, served several terms as President of the Howells Community Club. Belonged to the Colfax County Medical Association, the Nebraska Medical Association, and the American Medical Association. Member of the Masonic lodge at Leigh, Nebraska, and had for many years held precinct and county positions in the Republican party. Died April 3, 1951. Surviving are his wife, a son, and a daughter.

Frederick Blummer, M.D. Born in Salem in 1879. Graduated from Cottner University and took post graduate work at the University of Chicago and several Eastern Clinics. Graduated in 1907. Began practice in Lincoln in 1908. He was a Veteran of the Spanish American War and a member of the VFW. Died March 4 at the Veterans Hospital at Lincoln. Surviving is a son.

Human Interest Tales

Communications bearing human appeal are solicited. They should be addressed to The Editor, Nebraska State Medical Journal, 111 So. 39th, Omaha.

Dr. and Mrs. Lanspa of Tecumseh spent a month vacationing in Hawaii.

Dr. J. R. Zastera of Talmage has been called to active duty in the Armed Forces.

Dr. and Mrs. John J. Hanigan of Hallam are the parents of a son born March 1 in Lincoln.

Dr. R. P. Luce addressed the Fairbury Business and Professional Woman's club in March.

Dr. and Mrs. R. Russell Best of Omaha returned recently from a three weeks trip to Mexico.

Dr. and Mrs. Chester H. Waters, Jr., of Omaha are the parents of a daughter born in March.

Dr. L. W. Forney attended the Clinical Conference of the Chicago Medical Society in March.

Dr. F. J. Travnicek, Wilber physician, has given the Crete Municipal hospital a new baby incubator.

Drs. W. R. Peck and E. R. Chappell of Minden have combined their offices to form the Minden Clinic.

Dr. D. M. Bloch of Arlington addressed the Pre-School Study group on "Problem Children" in March.

Dr. and Mrs. J. A. Henske returned recently from a three month vacation in Mexico, California and Arizona.

Dr. J. W. Bennie was recently a patient in Rochester, Minn. He returned to Clearwater early in April.

Dr. R. R. Zukaitis of Papillion, a reserve officer in the Army, was called to active duty at Ft. Sam Houston, Texas, in April.

Dr. O. A. Kostal of Hastings attended the annual convention of the American College of Physicians in Hastings in April.

Dr. Donald Steenburg addressed the Aurora Rotary Club in March on the needs of the University of Nebraska College of Medicine.

(Continued on page xxxii)

The Nebraska State Medical Journal

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

Vol. 36 Norfolk, Nebraska, June, 1951 No. 6

EDITORIAL

It is possible, even probable, that by the time the June issue of the Journal reaches its readers our Unicameral Legislature will have determined the University budget with or without recommendation to the Board of Regents for special allotment to the College of Medicine. At this writing there is no way to predict the fate of the College. We can be certain of only one thing. Unless decent appropriations are obtained for immediate and far-too-long delayed improvements in plant and in personnel, no progress can be expected. And modern medical education being what it has been in recent years, Nebraska will continue to remain behind if not altogether removed from the ranks of Class A schools. As an Association we may then have the dubious consolation of having done everything possible in fighting for better quality of medical education in this state.

If, as we hope, our efforts turn out successful this Journal wishes to go on record congratulating the officers and many of the members of the Nebraska State Medical Association on an important task well done. Regardless of results, their unceasing efforts, time, and devotion on behalf of the medical college will remain a milestone in local history.

According to recent press reports the Board of Regents and Governor Peterson are opposed to a special budget for the College of Medicine. In their opinion earmarking operating funds would "encourage a confusion of pressures upon the Legislature from various groups interested in isolated phases of the University's program." Far from its intention to confuse issues the Nebraska State Medical Association has pointed out clearly the urgent necessity for improvements on the Omaha campus through decent appropriations. Our primary interest lies in sound training of medical students in order that Nebraska may produce a sufficient number of good doctors to serve the people of this state. If to accomplish this, earmarking is not necessary or undesirable from the point of view of the Board of Regent's policy, all the better. It is not our objective to interfere in administrative detail.

All we are asking for is a school of medicine which will compare favorably with those of our neighboring states. Is it a matter of local pride? Perhaps. We are extremely proud of our Capitol — without apology. It is one of the most magnificent in the country. A good medical school is more than an object of pride. It promotes the health of the people it serves.

The Nebraska State Medical Association will not ease its "pressure" until the medical college of our State meets and maintains the dignity of a first class institution. The people of Nebraska are entitled to it.

ON MEDICAL PUBLIC RELATIONS

The recent conference between members of the press and radio and the public relations committee of our Association deserves the serious attention of every physician practicing in Nebraska. No one who follows the trends in medical news reporting can overlook the improvements brought about in this field of journalism in recent months. Indeed the observer is impressed with the high quality of reporting and even more so with the increased number of column inches devoted to specific medical subjects and general news pertaining to individual and public health. And we are not talking about potboilers which in the past were the plague of every self-respecting editor. This is not to imply that the milleneum in popular medical journalism has been reached. Much more remains to be accomplished, and those connected with dissemination of news are fully conscious of the necessity for further improvements. It is to the credit of our Nebraska newspapers and radio stations that they are constantly striving to render better service by creating and maintaining wholesome reader interest in medicine and in the various problems that enter into medical care. They truly deserve full encouragement and cooperation not only for our Association, but as well of every individual member thereof.

While good medical news reporting contributes to the mutual understanding between the profession of medicine and the community as a whole the most effective method of maintaining good public relations between the physician and the patients involves the direct service rendered to the individual patient by the doctor.

It would be presumptious for this Journal to offer suggestions or advice to any physician on how best to serve his individual patient. However, we do feel justified in the interest of the profession to point out that the front office is not infrequently the spot where good or poor medical-public relationships are established.

Stories circulate in practically every metropolitan community throughout the land about alleged difficulties in procuring appointments for medical care. "The doctor is booked up for two months, would you like an appointment for that time?" Like all rumors this is undoubtedly based on half-truth. It is difficult to conceive of any physician denying service to his patients because he is "booked up." Yet we know of instances in which patients have found it necessary to change doctors because of discouragement from the front office. The problems thus created are obvious. They affect adversely the whole profession, and play directly into the hands of the would-be socializers with their perennial cry of "doctor shortages."

As we see it the solution of this dilemma would be simple if each physician made it a habit to investigate front office decorum at regular intervals. The average secretary wants to do what is right, but often is at a loss to evaluate the individual case when in her judgment the daily appointment record is "complete." Too frequently also the physician in hiring a secretary fails to clarify her functions, duties, and responsibilities connected with her job.

Our Executive Secretary, in recent months has been sending items directed to doctors' office personnel with suggestions for practices to promote good public relations. So far as we know no other state organization has undertaken this task and we wish to commend Mr. Merril Smith for his originality. The continuation of such copy, we are certain, will be of inestimable help in this direction.

ACTH HELPS SEVERELY BURNED CHILDREN

Further evidence that ACTH is a valuable aid in the treatment of severely burned persons was reported in the May 5 Journal of the American Medical Association.

Drs. Forrest H. Adams, Eldon Berglund, Samuel G. Balkin and Tague Chisholm, who administered the drug to three severely burned children, stated that there was a decrease in the fever, an increase in appetite and an improvement in the emotional status of the children. They received the hormone for five, 30 and 100 days respectively.

The authors explained that fever, lack of appetite, irritability and emotional instability, so often present in severely burned persons, pose many problems to the attending physician. For example, loss of appetite—probably related to the fever—and the loss of body fluids and proteins from the burned area might produce a state of malnutrition, making skin graft difficult.

The use of ACTH in severely burned patients is, they said, "a rational form of treatment justifying further investigation."

DRUG RELIEVES PAIN IN SOME CANCER PATIENTS

A chemical compound which can be given by mouth is reported to be useful in bringing temporary relief to patients suffering from fatal cancer-like diseases of the white blood cells and tissues.

The oral use of triethylene melamine on 58 patients is described by Drs. David A. Karnofsky, J. H. Burchenal, George C. Armistead, Jr., Chester M. Southam, J. L. Bernstein, L. F. Craver, and Cornelius P. Rhoads in the April Archives of Internal Medicine, published by the American Medical Association. The authors are associated with the Memorial Center for Cancer and Allied Diseases, New York.

Triethylene melamine is a valuable addition to the small group of drugs now known to be effective in relieving pain in these types of disease, according to the doctors. This is due primarily to the fact that it can be given by mouth, releasing the patient from his dependence on a doctor for administration of the drug. All the other drugs, they point out, have to be injected intravenously, which almost always makes hospitalization necessary.

Clinical trials with the drug are now being widened to include a greater variety of tumors.

Your President

DONALD B. STEENBURG, M.D.

Born April 25, 1890. Baccalaureate Degree from University of Nebraska in Lincoln; Doctor's Degree, University of Pennsylvania; Philadelphia Surgical House Officer; Massachusetts General Hospital, Boston; Medical Officer, Harvard Unit, 22nd General Hospital British Expeditionary Force, Dannes Camiers, France.

Medical Societies: Nebraska State Medical Association, Fellow American Medical Association, American College Surgeons, American Academy of General Practice.

Greek Letter Societies: Kappa Sigma, Nu Sigma Nu, Alpha Omega Alpha.

Masonic Bodies: Blue Lodge, Royal Arch, Scottish Rite, Shrine.

Church: Presbyterian.

School Board Member, 25 years.

PRESIDENT'S ADDRESS

Nebraska Medicine in the Mid-Century*

CHARLES H. SHEETS, M.D.
Cozad, Nebr.

With the termination of my office as president, it is appropriate that I submit to you a report of some of the events that have transpired during the past year. I would also like at this time to review some of the events of national importance as well as to give a report of the activities of your Association.

Soon after our last annual session our nation became engaged, in a so-called police action in Korea, which later with the entrance of Red China, became a full scale war. This new war necessitated measures, calling for more doctors for the armed services, as well as planning for civil defense. Upon the request of proper authority, your president appointed a committee known as the Emergency Medical Committee, to provide leadership in developing the medical aspects of the state Civil Defense Program. During this time the committee has, through a series of organization meetings, established close liaison and co-operation with the state's overall civil defense program, headed by Mr. Edward Gillette. A sub-committee has been appointed in each of the county societies. Dr. Roy Whitham, a member of the committee has been selected chairman of the State Advisory Committee to selective service. In addition a sub-committee on atomic injuries, under the chairmanship of Dr. Howard Hunt was appointed. The purpose of this subcommittee is to educate the physicians of Nebraska, and to disseminate information to the public on the medical aspects of atomic, chemical, and biological warfare. With this organization structure your Association is prepared to aid the state civil defense leaders and we have so informed them.

The call for voluntary enlistments of doctors into the military service was most disappointing. It therefore became necessary for Congress to pass a special draft law, for doctors, dentist, and veterinarians. This law necessitated the proper screening of doctors in Nebraska, so that no hardship or injustice would result. This function was given to the Military Affairs Committee, which for security reason has been kept secret. The doctors of Nebraska subject to the draft have all been classified and I am sure your committee gave careful thought and consideration to every doctor, and to every community in the state. I have been assured by this committee that no injustice has been permitted.

Because of the threat to ourselves as well as to American people, in the form of socialism, the doctors of Nebraska as well as those of the nation found that they must take a more active part in political issues. I trust that the year 1951 will be remembered by those, who would socialize this nation, as the year the American people awakened to the fact that bureaucracy had reached its limit. At the fall elections of 1950, the American people in no uncertain terms renounced those who promoted Compulsory Health Insurance, with its accompanied tax provision in the form of additional withholding from their incomes. The credit for this victory goes not alone to the doctors of America, but due credit must be given also to those who still cherish personal liberty and free enterprise. However great our victory, we must not allow ourselves to think that the battle against Compulsory Health Insurance has been won. We must be ever vigilant lest the social bureaucrats, through side door efforts and other means at their command, may still attack us from the rear. Medicine has been forced to enter politics, if we are to win we must watch all efforts of the opposition. Eternal Vigilance is our watch word for Freedom!

Present day political leaders in Europe have been struggling desperately to make socialism work as the way of life and the system of government. There are those who in this country are using this pattern on the American people. To them I would like to say, "Please review the splendid progress that free enterprise has made during this same period in Switzerland." Historically, this small country has a lack of natural resources (she has neither coal, iron, nor oil), but out of necessity the Swiss people have become thrifty and by self-employment have schemed to get the most out of what they have. People in America should accept the challenge to cherish liberty and to shoulder the responsibilities which it confers. There is but little difference between Socialism and Communism. One takes our liberty more slowly, but in the end our liberty is lost and we become the slaves of the state. I urge every doctor in Nebraska to take a more active part in politics, in his own community, in the state and in the nation. Protect America against Socialism.

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*Delivered before the 83rd Annual Assembly in Omaha, May 1, 1951.

In America today, we are fighting for the very existence of this free enterprise system, our own personal and national security. Let us fight at the grass roots to elect men to all political offices, who are moral and upright men who have only the interest of a free and better America in their hearts. We must forget party lines, remembering always, "The American Way of Life" is the best and greatest form of government that man has yet devised.

I would also like to report to you some of the activities and accomplishments of the Nebraska State Medical Association during the one-year period just ending and to point up future projects. These programs will be pointed out in the discussions listed under the names of the various committees.

1. COUNCIL ON PROFESSIONAL ETHICS

The Council on Professional Ethics was established by the House of Delegates in May of 1949. Its primary function is to review complaints made by patients against physicians and then attempt an understanding between the two parties. The business of the Council is known only to its members, hence, a detailed report is impossible. But the following is presented as a general summary of its work:

Number of complaints received	115
Number of complaints settled by council	84
Number of claims pending settlement	12

(The above figures were as of February, 1951).

Almost 90% of these complaints dealt with misunderstanding over professional charges. Although the records of the Council are confidential, it can be accurately reported that this body has proven to be an outstanding factor in building better relationships with the public.

2. MEDICAL SERVICE COMMITTEE

The Medical Service Committee is the Association's guardian on all legislative matters. It has kept itself informed at all times on both national and state legislation affecting the medical profession. Prior to 1950, it concerned itself only with state legislation, but during the last year it has assumed the additional responsibility of informing the membership on national legislation. To this end, the committee has sent three bulletins to all members on congressional proposals with which it felt the profession as a whole should be acquainted.

3. PLANNING COMMITTEE

The excellent foundation which the Planning Committee laid for the Expanded Program two years ago was still being implemented by the several committees. This committee felt that it should not add new activities until the various sections of the Expanded Program are more firmly rooted. It should be pointed out, however, that during the past year the committee completed revisions of the Fee Schedule for Governmental Agencies. The revised schedule has now been published and sent to all members.

4. PREPAYMENT MEDICAL CARE COMMITTEE

Throughout the year, this committee has continued to cooperate closely in support of the Blue Cross and Blue Shield Plans. This has led to the strengthening of these plans in enrollments and benefits. It has also received a recommendation from the Public Relations Committee that it evaluate all voluntary health insurance policies sold in Nebraska. The purpose of this evaluation is to give the people information as to what constitutes a good voluntary health insurance plan. This evaluation is now being considered by the committee.

5. PUBLIC RELATIONS COMMITTEE

From May 1, 1950, to May 1, 1951, the Public Relations Committee maintained a tremendous "informational pace." For this one-year period, the committee was responsible for the sending of 14 news releases to the newspapers and radio stations and 26 bulletins to the entire membership. The committee, it should be noted, undertook a new activity through the bulletin medium. It sent three bulletins to the office personnel of physicians, each with a message aimed at improving the public relations habits of physicians' office staffs.

The committee's most recent activity was the sponsoring of the second state-wide Medical-Press-Radio Conference, April 6. This meeting followed the reaffirmation of the Code of Cooperation at a meeting in June of 1950, with representatives of the Nebraska Press Association, Nebraska Broadcasters Association, Nebraska Hospital Association and the Nebraska State Medical Association.

Last spring the committee instituted a program of personal visits with members by Mr. Sidney Bradley, our Assistant Executive Secretary. The purpose of these visits was to afford physicians the opportunity to express themselves—either critically or favorably—on the operation of the Expanded Program and on all phases of medical organization.

Another recent activity of the committee has been its sponsorship of radio programs over Nebraska stations. These programs were secured from the AMA. To date 10 stations have accepted the 13-week series. (Three in Lincoln, two in Omaha, Hastings, Columbus, Beatrice, Alliance and Kearney).

The Committee's future plans include two regional meetings in the fall with members of the extended PR committee. These meetings will be held to help perfect local public relations planning.

6. RURAL MEDICAL SERVICE COMMITTEE

The committee has considered exhaustively a multi-point program which will be placed in operation during the coming months. To secure more nurses for the rural areas, the committee has adopted a plan for the training of nurses.

The committee has also outlined a school health examination and immunization program. With the assistance of the State Superintendent of Public Instruction, the parents of children about to enter school will be strongly urged to have these children immunized and to have a health form completed by their family physicians prior to starting school. This program is now in the process of being carried out.

Another point on the committee's program is the sponsorship of a pre-graduation day ceremony for medical school seniors. The purpose here is twofold: (1) To acquaint the seniors with the values of medical organization. (2) Acquaint them with the aspects of rural practice. In 1951, the committee will continue its study of health councils, as well as physician-school programs.

7. SPEAKERS BUREAU

Through the auspices of this committee, the Speakers Bureau Directory has been sent to each county medical society secretary as an aid in arranging for speakers for county society meetings. The committee's newest proposed project lies in the field of continuous scientific education. It is considering holding one-day post-graduate courses on regional levels.

8. CEREBRAL PALSY COMMITTEE

Last fall the committee sent out a news release and a bulletin, listing the state's diagnostic and consultation facilities for the cerebral palsied. This information proved valuable to both the public and the profession.

Its future plans relate primarily to the recommendation it has made to the Board of Control, that a 12 to 15-bed unit be established in the Orthopedic Hospital at Lincoln.

9. DIABETES COMMITTEE

The Diabetes Committee directed Nebraska's effort in the national diabetes detection drive, November 12-18, 1950, which led to the discovery of many unknown, untreated diabetics. To adequately inform members about the drive, the committee sent a packet to each member two weeks in advance of the campaign. This packet included a poster (stating that the physicians would give free urine tests), information bulletin, educational material and a questionnaire which was to be returned after the drive ended. Two hundred and fifty questionnaires were returned, showing that more than 8,500 tests had been made. Based on these returns, it was estimated that about 30,000 tests had been made by all physicians and that in the neighborhood of 250 to 300 undiagnosed cases of diabetes were found.

10. MCH COMMITTEE

During 1950, the committee held four meetings, three of which were with the State Department of Assistance and Child Welfare. The purpose of these meetings was to continue its policy of close cooperation with the department in all phases of its operation, and particularly in helping to reduce drug cost.

One of the committee's most noteworthy contributions was the correction of an error which frequently occurred in newspapers, i.e., that medical costs were wrecking the old age assistance budget. After proper investigation, the committee caused to be published a statement showing that physicians' fees constituted only a very small part of the

OAA budget, and further that charges were being attributed to medical care, an impression which did not coincide with fact.

11. PUBLIC HEALTH COMMITTEE

The Public Health Committee made an attempt to improve public health in Nebraska by the introduction of a bill in the legislature which would have established a technichal advisory health board to the Governor. Becoming embroiled in other issues, the bill was defeated. Nevertheless, appearance by the committee members before many county socities and lay groups has done a great deal to focus attention on Nebraska's public health problems.

12. CANCER COMMITTEE

The Cancer Committee continued its aggressive leadership in sponsoring tumor clinics throughout the state. Clinics are now being held in the following 12 cities: Beatrice, Lexington, Lincoln, McCook, Nebraska City, Norfolk, North Platte, Omaha, Scottsbluff, Wahoo, Alliance and Fremont. The latter two were added last year and the Hastings clinic became inactive. The committee feels that there are still several areas in the state where clinics could be successfully held if properly organized by physicians.

13. WOMAN'S AUXILIARY

One of the chief functions of the auxiliary during the past year was its sponsorship of an essay contest among the 11th and 12th grade students in Nebraska high schools. The topic of this education contest was "Medicine's Role in Preserving the American Way of Life."

14. NEBRASKA MEDICAL FOUNDATION

Upon the recommendation of the Board of Trustees of the Foundation, the money in the Student Loan Fund of the Nebraska State Medical Association has been transferred to the Foundation. This will enable the Foundation to aid more needy medical students, a function that will take on increasing importance as a result of the accelerated programs contemplated by the medical schools.

At the present time the Foundation is assisting one medical student and will help many others in the coming months. The Foundation is still pressing its efforts to gain the financial support of every member. In addition to these activities, the Foundation has during its tenure made two grants of $500 to the Creighton Medical School and another $500 grant to the University of Nebraska College of Medicine. These grants were made for research projects. Another research grant has been approved for a private physician.

15. NORTH-CENTRAL MEDICAL CONFERENCE

Representatives from the Nebraska State Medical Association attended the 1950 meeting of the North-Central Medical Conference in Minneapolis, Minn. Dr. Rogers was elected President-elect and will assume the presidency of the Conference at the 1951 meeting. The Conference is comprised of the states of North and South Dakota, Minnesota, Wisconsin, Iowa and Nebraska.

16. ADDITIONAL OFFICE EQUIPMENT

The expanded program during the past years has necessitated the replacement of antiquated equipment in our Lincoln office. This has been done to a large extent, although we need some additional equipment. This, I am sure, the Board of Trustees will approve at the proper time.

We are most fortunate to have in our employment Mr. M. C. Smith, our Executive Secretary, together with his assistants, Mrs. Ruth Murphy and Mr. Sidney Bradley. I wish to thank them for the assistance they have given me during the past year. It is to the headquarters staff that the great measure of praise should be given for the progress your Association has made during the past year.

I wish to thank every member of this Association from the bottom of my heart for the honor which you have bestowed upon me. I have tried to the best of my ability to merit your confidence. Medicine is a progressing science. Every doctor in Nebraska should render service to the people in Nebraska second to none in America.

Babies born of tuberculous mothers who are removed from contact with the mother immediately after birth do not contract the disease, according to three pediatricians.

Drs. Bret Ratner of New York, Alexander E. Rostler of Fall River, Mass., and Pierre S. Salgado of Port-Au-Prince, Haiti, writing in the April issue American Journal of Diseases of Children, added that with proper diet these infants will grow and develop the same as infants born of healthy mothers.

According to the article, the incidence of prematurity in offspring of tuberculous mothers is exceedingly high, ranging from 23 to 64 percent, depending on the severity of the disease in the mother.

Management of Advanced Carcinoma of Pelvic Origin*

EARL C. SAGE, M.D.
Omaha, Nebraska

The management of advanced carcinoma of pelvic origin can be summarized in one word: palliation. However, the comfort and longevity of patients with ineradicable cancer of the pelvis may be increased if measures are instituted to alleviate their anxiety, anemia, depression, insomnia and loss of appetite, which may make invalids of them sooner than does the neoplasm.

We must instill hope in the patient; hope that the invasive process in her individual case may be stopped, or hope that it may be slowed to a point where she may complete the major part of her anticipated span of life. Proper attention to nutrition and judicious application of simple therapeutic agents can improve the outlook for useful existence.

Some benefit may be gained by parenteral administration of vitamins, especially the B-complex. In addition, intravenous glucose, electrolytes and blood transfusions, largely in the course of therapy will materially improve the state of health. Efforts at overcoming the metabolic disturbances produced by cancer are directed largely at providing the patient with an adequate supply of proteins and calories. These must be administered under circumstances in which the assimilation of food stuffs is hampered by anorexia and by deviations both in the motility and secretion of the gastrointestinal tract itself. The food intake may be encouraged by giving frequent, small feedings of low residue or liquid type, with particular regard for personal preferences, and physical attractiveness of the food is most important.

These measures should not be neglected in the management of patients with advanced carcinoma of pelvic origin because most of them are referred for x-ray and radium treatment as a final attempt to stop bleeding, or to retard the growth and spread of the neoplasm. Distressing nausea usually persists during radiation; vomoting is frequent. Occasionally patients are profoundly prostrated; vesical disturbance or rectosigmoid discomfort is often encountered. Radiation therapy is a great boon, but it is not innocuous. Anemic patients are not good subjects for radium and intensive high voltage x-ray therapy. Blood transfusion is almost as vital in preradiation treatment of ensanguinated patients as it is in preparation for radical hysterectomy. Debilitated cancer patients, many of whom are deficient in serum proteins, are also helped by intravenous administration of a 5 per cent solution of amino-acids in a 5 per cent solution of dextrose in water. When tempting foods do not entice, the administration of glucose solution lessens the thirst and often relieves the nausea ascribable to inanition acidosis. For radiation sickness, Dramamine, or intravenous injections of 100 mg. of pyridoxine may be helpful.

There are definite types of advanced carcinoma of pelvic origin which do not respond well to radiation, and personally, I would not advise those patients to undertake the pelvic exenteration operation. This procedure calls for bilateral lymphadenectomy, abdomino-perineal resection of the bladder, uterus, rectum, vagina, and external genitalia, together with colostomy, and transplantation of the ureters either into the colostomy, or the skin. The hospital mortality is 30 per cent(1).

The principal neurological disturbance in cases of advanced carcinoma of pelvic origin is pain. Pain is caused by the pressure of expanding tumor masses as well as by irritation of the sensitive nerve endings exposed in the course of tissue destruction and ulceration. The pain of cancer tends to be constant and severe. Curtis(2) has found that the average patient can be maintained in peace and relative comfort by giving one to two grains of codein combined with aspirin. Morphine, on the other hand, relieves suffering for not more than a few hours, the patient becomes habituated to the drug and continuously increasing dosage is required. Severe leg pains mean involvement of the lumbar nodes with pressure on posterior nerve roots. Chordotomy, alcohol injections of the posterior roots, lumbar sympathectomy are methods employed to give relief from this distressing complication. Once the fact of incurability has been established, analgesic drugs should be administered as often and in whatever quantity necessary to provide comfort and relaxation. Demoral, Metropon, and Dolophine are powerful analgesics which have been used. The latter two are morphine derivatives of greater analgesic effectiveness than morphine, and practically devoid of emetic effects.

Meigs(3) and his associates point out, that approximately 60 per cent of patients with cancer of the cervix die, and the majority die with the disease sharply confined to the pelvis. To be sure, certain patients, usually with grade three lesions, die of remote metastasis to lung and bone, but by far the greater number come to a terminal issue with extensive disease in the pelvis alone. To this Boston group this is a challenge. They have proposed retroperitoneal lymph node dissection in the iliac, hypogastric and obturator areas as a supplement to radiation therapy. The sole consideration in the selection of the suitable case for this operative procedure revolves around the evaluation of the chance of local cure three or more months after completion of the full course of radiation therapy. The estimate is based on clinical appraisal, vaginal smear, and biopsy. The trouble with vaginal smear is that it is almost impossible to distinguish between the effects or irradiation on non-malignant cells and malignant cells. Some doubt their report on basis of smears. In a group of fifty patients subjected to this procedure the mortality was 4 per cent. These men stress the fact that the work is experimental and that this series is of too short duration to give much of an indication as to whether surgery will prove any more successful than radiation in the salvage of cases where the nodes are involved.

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*Read before the Omaha Mid-West Clinical Society, October, 1950.

Erle Henriksen studied the spread of carcinoma of the cervix and of the body of the uterus(4). This was a survey of 420 autopsies; 356 patients died with carcinoma of the cervix, and 64 patients with adenocarcinoma of the corpus uteri. Treatment consisted of both x-ray and radium therapy in most instances. This author made some significant statements:

1. His estimate of the extent of the disease was in error by 25 per cent compared with the findings at autopsy. In most instances, inflammatory induration of the parametrium was misinterpreted as clinical evidence of malignant extension.

2. He found the failure to estimate properly the presence or absence of cancer from the gross appearance of the node was approximately 20 per cent, either at operation or autopsy. Enlargement of the node was not pathognomonic of metastasis. Alteration in size may be due to an inflammatory process, while a small adjacent node may contain carcinoma.

3. The nodes of 17 per cent of the treated cases located within the accepted range of the effect of irradiation, showed no disturbance of their histological pattern; 12 per cent of non-treated cases had nodes which showed the changes generally attributed to the effects of radiation, that is, marked fibrosis and hyalinization. In other words, it was impossible to determine the amount of irradiation by the changes within the node.

4. The parametrial nodes were involved in 77 per cent of the non-treated cases, and 33 per cent of the treated cases. Distant metastasis occurred in 27 per cent of the non-treated, and 53 per cent of the treated cases. There are 7 plates to show the incidence and location of the node group involvement and distant metastasis. The liver was the most frequent site of metastasis, with the bone, lung, and bowel involved in that order. There was primary involvement of the ureter in 2.1 per cent of the cases.

5. In this series, uremia was the assigned cause of death in 58.5 per cent of the non-treated cases, and 49.3 per cent of the treated cases. However, an added 24.3 per cent of the non-treated cases had evidence of ureteral compression with hydronephrosis, and in 29.3 per cent secondary ureteral involvement was present in the treated group. Thus 82.8 per cent of the non-treated, and 78.6 per cent of the treated cases had evidence of ureteral compression and kidney damage. Cachexia, hemorrhage, intestinal obstruction, and peritonitis accounted for the remainder of deaths.

In my opinion, this prodigious study made at the University of Southern California Medical School is of utmost value to us in the management of carcinoma of pelvic origin from an anatomical and pathological basis. Henriksen did not discuss the clinical application of these interesting data, but we can make a few conclusions of our own:

1. That irradiation cannot be counted on to kill cancer lymph nodes; methods must be evolved for the surgical removal of these foci.

2. Since uremia accounts for such a large proportion of deaths, methods for relieving it should be considered. In this respect pylostomy will prolong life, but, on the other hand, a uremic death isn't a bad one.

3. Since distant lymph node metastases occur in both groups, more in the treated groups, it is obvious that the usual lymphnodectomy, (Taussig or Meigs) is not satisfactory. Methods must be evolved for removing nodes higher up, and for the recognition of malignant nodes.

Progress in improving the survival rate

from cancer of the ovary in the past two or three decades has been relatively slight. The insidious onset of the disease frequently results in its early stages going unrecognized by the patient; it is also often unrecognized as such by the doctor. The site of the lesion renders it inaccessible to simple methods of anatomical diagnosis such as smears, biopsy, and currettage, as in the case of cervix and corpus uteri tumors. In occurrence it is second to frequency of cervix and fundus carcinomas of the female genitals.

Munnell and Taylor(5) (Sloane Hospital) report on 200 primary and 51 secondary cases of ovarian carcinoma. They advocate complete surgical removal of the internal genitalia as the treatment of choice. The 5 year over-all survival rates are 30.8 per cent absolute, and 27.5 per cent relative. In this series 64 per cent of the patients had gross evidence of peritoneal or visceral metastasis at the time of operation. Radiation therapy has a definite place in the treatment of certain cases of ovarian carcinoma, chiefly to prolong survival time and perhaps occasionally to cure residual disease.

SUMMARY

With our present knowledge, the treatment elected for the management of advanced carcinoma of the cervix is radiotherapy.

In the case of ovarian carcinoma, complete surgical removal of the internal genitalia is the treatment of choice, combined with post-operative radiation. Carcinoma of the ovary is still one of the least curable cancers of the female genitalia.

In cases of cancer of the corpus uteri, a total hysterectomy and bilateral salpingo-oophorectomy following preoperative radiation assures a higher rate of survival.

To overcome the apathy, loss of zest, the general let-down feeling of aimlessness, and the revulsion against the routine of every day life in patients with advanced carcinoma, we should employ the therapeutic agents of a supportive nature which can improve the outlook for a useful existence.

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Functional and Organic Disorders of the Colon*

From the Viewpoint of the Internist

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In a paper of such limited scope on the broad subject of diseases of the colon one must of necessity spend the time on those aspects which are most common, with the others merely mentioned in passing.

From the standpoint of the internist the most important disorder of the colon is the large group of cases which we recognize as functional under the name of spastic colitis, irritable colon or possibly better, unstable colon. This order brings many patients into our offices for examination, with the diagnosis based more on the history than on the examination. The main complaints the patients present are varying degrees of pain ranging from uneasiness to severe crampy pains anywhere in the abdomen along the course of the entire colon. As a rule these complaints are of a prolonged nature and they come and go depending on the general condition of the patient.

In taking the history one is impressed by the manner in which the symptoms are recited, as well as the nature of the symptoms in themselves. One generally finds that there is no particular connection with intake of food, but there may be some relation to bowel activity. This group makes up a rather large number of patients who have chronic constipation and many have been taking laxatives of various sorts over long periods of time. As they recite these symptoms we get the impression that they are worried about themselves and they have fears that they are suffering from a very serious disorder. Quite frequently they come in because they know someone who has had a similar complaint turned out to be a malignant lesion. We are also greatly impressed by the many who have had their appendix removed for a so-called chronic appendicitis, yet they still complain of the symptoms they had before their operations.

One must take a very complete history by systems and also a complete history as to the emotional life of the patient, We must then determine whether or not they have other symptoms suggestive of a nervous disorder such as fatigue, especially severe on arising, a feeling below par and other vague complaints which go along with the main complaint of distress in the abdomen. One must then ascertain as to whether or not dietary indiscretion has any connection. Also, one must decide whether or not there has been any weight loss out of proportion to symptoms together with a complete history as to the bowel habits and of stools which may contain blood. We must recognize that although some individuals present functional disorders many at some time in life develop organic pathology at some site in the body.

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*Read before the Omaha Mid-West Clinical Society, October, 1950.

On examination one finds tenderness on pressure over the entire colon, but as a rule more so over the cecum and low ascending colon and the low descending colon and in the sigmoid areas. In most of these patients if the abdominal wall is not too thick the colon feels ropey and hard as well as tender to the touch. If the symptoms have been existing for a long period of time it advisable to examine the stool for blood. We also feel that in these cases a barium enema is a most valuable procedure. Even if we find nothing of an organic nature on this examination the benefit these patients receive from reassurance from negative findings on x-ray is a great asset in further treatment.

One must also remember that so-called "irritable colon" is often a complication of cholelithiasis, peptic ulcer, intestinal parasites and other organic lesions of the gastrointestinal tract.

Another group we see quite frequently and which goes along with the so-called irritable colon is that with chronic diarrhea and mucous colitis. I believe it is now recognized by most authorities that mucous colitis is for all intents and purposes a disease due to chronic nervous tension with secretion of excessive amounts of mucus. This condition often comes with the so-called psychogenic diarrhea which follows tension states and emotional storms. It is possible that irritating foods and drugs may help precipitate some of these symptoms.

One sees a large number of patients with diseases of the colon which are manifested by diarrhea. We all recognize the epidemic types of so-called virus infection enterocolitis with diarrhea lasting one or two days and followed by normal gastrointestinal function. This is not the group that is of as great consequence as the large group of chronic diarrheas which one sees from time to time. There are many causes of these diarrheas including those which may be due to achlorhydria or to diseases of the intestines, especially infectious agents, such as bacillary dysentery and other types of bacterial infection such as typhoid, paratyphoid, Salmonella, streptococcus or fungus groups. Also, we occasionally see those due to lymphopathia venereum. There is also another large group which is due to protozoal agents, the most common being amebic colitis with dysentery. There are other protozoal causes, Giardia lamblia, trichomonas hominis and those due to the helminths, like strongyloides, trichinella spiralis and the cestodes.

In this group of chronic diarrheas I believe the ones we should be looking for primarily are those cases with amebic infection. When one realizes how few cases we see in our practice and by reading statistics recognizes that in the neighborhood of 4 to 5 per cent of the population have amebic diseases one appreciates what a small percentage are actually picked up and treated as such. Due to the rather serious complications which may follow amebic infection it behooves all of us to examine our cases of chronic diarrhea regardless of home and environment, as amebic infection is found throughout the country. The best method to diagnose this is to take any case that has persistent diarrhea and after giving a large dose of Epsom salts, examine the stools for the amebae. The results will depend to a great extent on the individual making the examination, as most physicians and technicians are not acquainted sufficiently with this protozoa to recognize it on examination. Another excellent way to diagnose amebic infection is to do a proctoscopic and sigmoidoscopic examination and get the organisms directly from the ulcer. In this manner it is more easily recognized. We also pick up a rather good percentage of cases on routine barium enema x-rays. If one is on the alert small ulcers can be recognized or suspected and then a more complete stool examination made to either make the diagnosis or rule it out.

The diagnosis of other infectious agents may be made by blood agglutinations. We are now getting a great deal of help from a new laboratory procedure for examination of the stools.

If the diarrhea is due to achlorhydria this can be found out by doing a gastric contents analysis. There are quite a large number of these patients in the age group past 55 or 60 in whom an achlodhydria is the cause of the diarrhea.

There is another group of diarrheas which we see secondary to drugs. The drugs which are most commonly the causes of this are alcohol, mercury and arsenic. These can generally be discovered from the history given by the patient.

Another type of chronic diarrhea which fortunately one sees not too often is the so-called chronic non-specific ulcerative colitis. This is a disease which involves the entire colon and is manifested by prolonged diarrhea with the presence of blood and pus in the stools. Along with this the patient is gravely ill, loses considerable weight and is unable to partake of sufficient nourishment. The etiology of this condition is not known at the present time. There have been many suggestions as to the cause but the most commonly accepted one is that it has a psychogenic background. If these patients are seen very early with diarrhea, blood, superficial ulceration and the accepted radiological findings one can do a great deal by putting them on a bland diet, the use of antibiotics according to the sensitivity test, and spending a great deal of time with psychotherapy. All authorities in this field place emphasis on proper psychotherapy in order to clear up these conditions. Another recent advance in the therapy is the use of the Miller-Abbott tube for medical ileostomy. Along with this the use of the antibiotics, a diet consisting of protein milk and dextri-maltose with vitamins and repeated blood transfusions have been successful.

Other common causes of diarrhea and colonic disease are ideopathic steatorrhea, deficiency states with hypoproteinemia, avitaminosis, such as pellagra, sprue and chronic pancreatic disease. Also, biliary disease, especially with fistulae between the biliary system and the intestinal tract may be a cause of diarrhea. The diarrheas which come from inflammation in the peritoneum, as in pelvic abscess, appendiceal abscess, disease of the kidneys and gallbladder, must not be overlooked.

We also have to take into consideration benign tumors of the colon. There are a large number of these which include adenoma with or without polyposis, papilloma, pseudoadenoma, lipoma, adenomyoma, myoma, fibroma, angioma, lymphoma, neurofibroma, teratoma, cysts, parasitic granuloma, paraffinomas and also some extra-colonic tumors which may invade the colon, such as glioma, endothelioma, chordoblastoma and caudal appendages. Of this group one may say that with the exception of the adenomatous polypoid lesion, benign tumors of the colon are relatively rare. On the contrary, the adenomatous type of polypoid lesions in the colon is more common than generally considered and in x-ray studies in some of the larger clinics may represent an average of one in every 55 x-ray studies of colonic disease. These polyps may be associated with ulcerative colitis in as large a percentage as 16%, and they may also be associated with carcinoma in an average of 25 to 40% of the cases. It is interesting to know that from 66 to 75% of all polypoid lesions can be seen with the sigmoidoscope. Because of the danger of malignant degeneration polyps must be treated with great caution.

A common finding in the colon of individuals past mid-life is diverticulosis. This apparently is a degenerative disease and is much more common than anticipated. The main complication of diverticulosis which must be watched for is diverticulitis. The diagnosis of diverticulosis is important, as with this knowledge one may suspect any of the complications which may turn out to be serious.

There are quite a few developmental abnormalities of the colon which one must take into consideration, such as rotation and descent of an abnormal nature. One must not overlook anomalies of fixation of the colon, also anomalies of length and size such as megalocolon, redundant colon and even cases with absence of colon or duplication or even triplication of the colon.

There are also those rare conditions such as actinomycosis and blastomycosis of the cecum. A not uncommon, and often overlooked disease, is lymphopathia venereum. It is more common in females and can be diagnosed by rectal examination. If in doubt the Frei skin test may be used for confirmation.

The one thing we must keep in mind with all types of colonic disorders is malignancy of the colon. In all patients with disorders of the colon, regardless of age, one must always think of the possibility of malignant lesions. Statistically we find that 85 to 90% of these lesions are in individuals over 40 years of age and 60% are between the ages of 50 and 70, 5% are under 30 years of age and the other 5 between 30 and 40. The average age is 55. Therefore, there is no age group that is entirely exempt from a malignant lesion. There are about 2 males to every female. The most discouraging feature about malignant lesions of the colon is that there is generally an interval of 9 months between symptoms and diagnosis in malignancies of the rectum and 1 year between symptoms and diagnosis in other malignancies of the colon. This in itself means that many of these patients are quite far advanced before they get adequate treatment and it makes us realize that we must be more conscious of this lack of proper symptoms and spend more time trying to discover these lesions.

The symptoms may be from none to irritation, as diarrhea, constipation, gas consciousness, discomfort, soreness and pain. It may be obstruction with production of obstipation, colic, borborygmus, and abdominal distension. Also ulceration is characterized by bleeding from the bowel and the passage of bloody mucus. With peritoneal irritation there is increased localized abdominal pain and tenderness, fever and leukocytosis. Constitutional deterioration is marked by loss of weight and strength and the common features of anemia and cachexia.

Malignant lesions of the colon consist of carcinoma, which may be in the form of adenocarcinoma, which makes up 95% of the malignant lesions of the large bowel. There also may be epitheliomas which are divided into squamous cell and basal cell carcinoma. There also may be carcinoid lesions. The sarcomas of the large bowel are divided into leiomyosarcoma, fibrosarcoma (spindle cell sarcoma), angiosarcoma, malignant lymphoma with its various lesions, including Hodgkin's disease. There also may be malignant melanoma of the large bowel.

Of all the carcinomas in the human body malignancy of the large bowel represents 11% and malignancy of the rectum and anus 5% to 6%.

Most malignancies of the colon are so-called Broders Grade 1 and Grade 2 wth rectal epitheliomas generally as Grade 3.

Carcinomas of the right colon are characterized by constitutional symptoms rather than by obstructions. In this area the dyspeptic group represents 60%, the group with anemia without visible blood loss and with profound weakness and loss of weight and strength represent 30% and tumor masses that can be palpated 5 to 10%. Carcinoma of the left colon has clinical manifestaions of obstruction and late constitutional deterioration and ulceration with bleeding, more commonly apparent in the stools. In carcinoma of the rectum the symptoms are referable to defecation, changes in the character of the stool, visible bleeding and changes in regularity.

How do we determine a diagnosis of carcinoma of the colon? Following are the criteria on which such a diagnosis can be made: Change in the bowel habits such as constipation or diarrhea or recently acquired abdominal discomfort, soreness or pain related to the act of defecation; gradual development of increasing distention and peristaltic unrest; attacks of partial intestinal obstruction or abrupt onset of complete obstruction for which no cause, such as hernia, is apparent; the passage of blood from the rectum; the palpation of an abdominal mass, and progressive anemia with loss of weight and strength which is unexplained in any other manner. Any one or a combination of these symptoms should make us look for malignant lesions of the colon.

In the laboratory findings, 66% with right colon lesions have anemia and 33% in pelvic colon lesions. There is occult blood in the stools in practically all cases. Any patient who has diarrhea, constipation or abdominal symptoms which can not be explained should have a stool examination. The type of stool examination for blood is very important, as most tests are either too sensitive or not sensitive enough. In our experience we have found that "hematest" tablets are the most reliable. If these are used it is not necessary to take the patient off meat for three days. The test is made by application of a small amount of the stool to one of the tablets and adding a drop of water. It must be remembered that occult blood to be of value must show up within 30 seconds after the water is applied. Any discoloration coming on later is due to the presence of myoglobin. We have found this a most valuable and easy way of finding the presence occult blood. We must then account for its presence.

Seventy-five per cent of all cancers of the rectum are within the reach of the examing finger. The other methods of diagnosis are by the use of the sigmoidoscope and of x-ray which are indispensable.

One of the most common disorders of the colon is fecal impaction. This is often overlooked in older individuals and those who are kept in bed on account of illness. This may cause a great many symptoms and may aggravate any existing illness. We have found that the only way to be sure that a bedfast patient does not have a fecal impaction is to do a rectal examination every few days, as many patients will give fair results with enemas and laxatives but still have a small discomforting fecal impaction. There are many other lesions and conditions in the colon which exist but it would be impossible to incorporate or even mention them in a paper of this scope.

The treatment for the various disorders of the colon depends upon the underlying etiological factor. It is encouraging that we have a great deal more to offer these patients than we have ever had in the past. For the therapy of the most common complaint, so-called "irritable colon," we have found that reassurance is of the greatest value. A great deal of time must be spent with these patients to find out the mechanism producing the nervous fatigue and this should be explained and if possible corrected. We have also found that a very careful examination including stool and x-ray studies goes a long way towards giving the patient confidence that there is no serious organic disease and helps one go ahead with the psychotherapy.

For the treatment of the disorder itself we give a combination of atropine and phenobarbital or similar combinations. In some of our extreme cases we have even tried small doses of banthine. We feel that the most important part of this treatment is follow-up psychotherapy, seeing the patients every one to two weeks and once a month until such time as they have discovered their situation is not serious and they have adjusted themselves to their problems.

The treatment of mucous colitis is the same as that for spastic colitis. In the treatment of both conditions, until the patient has recovered, we take most roughage out of the diet but we do not feel that diet itself plays a too important part.

In the treatment of cases of chronic diarrhea we first discover if possible the exact etiological agent. If it is due to one of the bacillary infections we culture out the organisms and then test it in the so-called "sensitivity test" to see which of the antibiotics is indicated. It is surprising to see how many of these organisms are sensitive to streptomycin.

If we discover an amebic infection the patient is given 1 gram of aureomycin to start with and then ½ gram every 6 hours for 7 days. If he develops sore mouth or soreness and irritation around the rectum we give him large doses of B-complex, preferably hypodermically. This helps overcome the irritating effects of this antibiotic. In looking over the literature we find that the end results of aureomycin are not as good as first expected. Therefore, the patient must be reexamined and if we still find evidence of infection we put him through the old therapy of emetine or carbarsone followed by chiniofon, vioform or diodoquin. New drugs including the thioarsenites are being used in clinical experimentation.

For the cases of lymphogranulome venereum we have found that prolonged use of sulfasuxidine or sulfathalidine is quite beneficial. The recent literature brings out the fact that aureomycin is also of benefit but we have not had enough experience with it to know if it is superior to the sulfa drugs.

For cases with chronic diarrhea due to achlorhydria the administration of hydrochloric acid before meals brings rapid response. This is often a neglected condition in the older age group. Non-tropical sprue is treated by a high-protein, low-fat diet, folic acid, liver extract, and/or B-12. In deficiency states we employ a high protein, high caloric diet and the particular vitamin which is lacking. The pancreatic diseases are carried on low fat diet, vitamin B-complex and the administration of various types of pancreatic extracts.

Therapy of the disorders due to diseases of the biliary tract, peptic ulcer, pelvic disease, appendiceal abscess or renal disorders, or disorders of the nervous system is directed toward the underlying etiological factor.

The most difficult situations to treat are the colon disorders due to the prolonged use of laxatives. It is our impression that there is practically no place in medicine for the use of laxatives. We feel that the most important part of treatment is to convince the patient that daily bowel movements and laxatives are not essential to their general health and that these are old-fashioned ideas without background. We then put them on a regimen which consists of one or two glasses of water on arising, at breakfast a half glass of prune juice filled with warm water to make a glass, followed by a glass of water in the middle of the morning and repeated in the middle of the afternoon. They are told to set a definite time to go to the stool and to spend as much time as necessary in order to get the bowels in regular habit. If their bowels do not function in this manner they are told to take a saline or tap water enema at the end of three days. We have found very few cases that do not respond to this regimen. In cases with hard stools which are irritating we give one or two drams of mineral oil at bedtime until the condition is corrected.

In the occasional case of chronic ulcerative colitis we have found that the best therapy is to put them on a low residue diet with the administration of large doses of vitamins. Repeated blood transfusions are used to bring the blood up to normal. In severe cases the use of so-called medical ileostomy by using a Miller-Abbott tube is helpful, as is the use of the various antibiotics in accordance with the sensitivity test. We feel that psychotherapy and even psychoanalysis in these patients are the things which do the greatest amount of good. In case of failure to respond to all of these measures they of course must be treated surgically but only as a last resort.

The treatment of diverticulosis is to put the patient on a simple bland diet with a minimum of roughage. We occasionally have these patients take 1 or 2 drams of mineral oil at bedtime and if the bowels are not regular, resort to the use of tap water or saline enemas. The main thing to do in the treatment of diverticulosis is to explain the changes found, so that if there are any complications the patient will be able to tell the attending physician the underlying pathology. If a diverticulitis complicates this the patient is put to bed at rest on a liquid diet and given penicillin parenterally and by mouth either one of the sulfa drugs such as sulfasuxidine or sulfathalidine or aureomycin. If the diverticulum ruptures and causes peritonitis it must be treated surgically.

The benign tumors of the colon are treated by removal. The malignant tumors are also treated surgically except in cases of the lymphomatous group. If these can be diagnosed by biopsy, x-ray therapy is of greater value than surgery and the results are quite lasting.

Treatment of Leukemia*

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The consideration of the therapy in leukemia is rather discouraging, in view of the fact that all treatment that we know today is only palliative. The physician, after having made the diagnosis, has too often been guilty of "walking out" on his patient and turning the full responsibility over to the radiologist. By using all the various methods available and by keeping the leukemic patient under the closest observation, the physician has a great deal to offer his patient, measured in months of greater wellbeing. These new features are indeed challenging and they may open the way to the problem of all neoplastic diseases.

No two cases are alike, and each case has to have selective therapy. It seems presumptious, yet important, to state that not all cases of leukemia need treatment. Not infrequently a patient will be observed having a moderately high leukocyte count associated with other findings of leukemia, such as enlarged glands or spleen or both, but with a fairly normal red blood cell count without remarkable constitutional signs. It is this type of case that we prefer to observe until there are positive signs of progression of the pathological processes. We, as clinicians, should select the therapy that will best fit our individual case. Treatment in general is directed at the fundamental abnormality, namely, the leukopoietic hyperplasia. This requires an accurate histologic diagnosis of the disease and a knowledge of its natural course.

We may define leukemia as a progressive disease characterized by widespread and abnormal proliferation of the leukocytes and their precursors throughout the body, and particularly in the bone marrow, spleen and lymph nodes. This is in all probability neoplastic in nature. We are inclined to place too much emphasis on the white blood cell count and use it as the indication for treatment as well as the guide for the effectiveness of our treatment. To select the best plan of treatment, we need to know certain facts about the disease. It is helpful to have a practical working classification, to know something of the pathogenesis, to understand some of the mechanisms of the symptoms, and to know in what way our therapeutic measures are effective. In addition, it is important to have a working knowledge of the clinical course of the disease in order that we may give a prognosis that the clinical course will later bear out.

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*Read at the Regional Meeting of the American College of Physicians, in Omaha, Nebraska, February 17, 1951.

A working classification, by necessity, needs to be a simple one. In leukemia the classification will depend upon the parent cell type and the quantitative and qualitative leukocyte response, especially as it pertains to the abnormal cell forms. On this basis, the following classification can be arrived at:

1. Myelogenous leukemia, acute and chronic.
2. Lymphatic leukemia, acute and chronic.
3. Monocytic leukemia, acute and chronic.
4. Plasma cell leukemia, possibly related to lymphogenous type.
5. Miscellaneous forms—megakaryocytic, eosinophilic, etc.

The morbidity of leukemia ranges from a very acute fulminating disease of only a few weeks' duration to a relatively benign, chronic disorder compatible with life for many years. The acute and chronic types are differentiated by (1) the duration of the disease, (2) the severity of symptoms (fever, hemorrhagic phenomenon and prostration), and (3) peripheral blood changes. Severe anemia, marked reduction in the number of blood platelets, and a high percentage of immature white blood cells are the main characteristics of acute leukemia. The degree of immaturity is directly proportional to the intensity of the disease.

For practical reasons, the subacute leukemic states are not included in this classification. We can say rather summarily that if we fully understand the acute and chronic forms we can institute the proper form of treatment. Also it will be noted that aleukemic leukemia, which is included in many classifications, is omitted here. This condition is not a separate disease, and the decrease in the leukocytes, or the aleukemic phase, may develop in any of the known types. Unfortunately the mechanism of the leukopenic phase is not well understood. It has been a source of much confusion, and when it is present offers one of the most difficult problems in diagnosis and in treatment. In our experience it has tended to increase the gravity of the prognosis.

The etiology of leukemia is not known. It has been suggested that the essential defect is the absence of a maturation factor, allegdly present in normal blood. The disease is known to occur at widespread age ranges and the acute form occurs more especially under ten years of age. There is a distinct increase in the incidence of males over females in the chronic types. For instance, in chronic lymphatic leukemia this difference is as great as 3 to 1; but in the acute types this sex difference does not seem to prevail.

In experimental animals, transmission of leukemia is influenced by genetic laws. This influence, however, does not seem to carry over to the human. There are those who believe the influence of heredity does not exist in the human as in the experimental animals but is changed by environmental factors.

Some investigators still contend that leukemia is caused by an infectious agent, based chiefly on the fact that fowl leukemia is carried by a filterable agent which has been identified as a virus. Furth(1) maintains that leukemia is a neoplastic disease and is characterized by uncontrolled proliferation of some cell of the leukocytic series. He states that "leukemia cells are malignant," and can be specifically designated as such. The alterations which occur in the leukocytic processes in leukemia are four in number: (1) cell division, (2) growth in size, (3) maturation, and (4) release of cells into the blood stream. Mammalian leukemia has been transmitted experimentally by the use of viable cells. Human leukemia is not transmissible and several attempts have been made to transfer it directly from one individual to another, without success. Laukemic cells possess many of the characteristics of neoplastic cells, more especially abnormal mitoses and abnormal size and number of mucleoli. There is more and more evidence developing that the loss of control of maturation is due chiefly to hormonal imbalance. The recently discovered responses of leukemia to the administration of hormones, particularly of the adrenal cortex, seems to lend credit to this view. In addition to these the balance of various other substances such as folic acid, and its antagonists, nucleic acid metabolism, and no doubt numerous other such biological relationships yet undiscovered, add up to the real cause of uncontrolled cell growth, or neoplasm. The author envisions the day when the research laboratory specialist will be able to make a complete "biological assay" of the leukemic patient, telling the physician what the exact deficiencies are and how they may be corrected.

Certain effects of leukemia can well be considered at this time. They may be local or general, and the signs and symptoms of the disease will vary as the intensity of the leukemic process.

The leukemic infiltration of the various organs and particularly the bone marrow results in the dysfunction of these organs. Enlargement of the lymphatic structures, especially in lymphatic leukemia, may give rise to untoward symptoms. As a rule the enlargement of the peripheral lymph nodes, the tonsils and the spleen seldom cause any symptoms unless extremely enlarged and unless the enlargement encroaches over a more important structure, such as a part of the nervous system. Venous circulation may be disturbed by the enlargement, causing edema, especially in the lower extremities. The enlargement of the glands in the thorax may lead to tracheal obstruction, causing asphyxia. This is a fairly common symptom, especially in children, and may be the only presenting symptom.

Leukemic hyperplasia offers the best explanation for the anemia that is so common in this disease. The influence on red cell production is direct; there is mechanical interference with erythropoiesis. Osgood is of the opinion that the anemia is due in part to phagocytosis of the red cells by the leukemic cells. Jaffe(2) holds a similar view and, furthermore, he states there is excessive destruction of the erythrocytes as is shown by collection of hemosiderin in the blood-forming organs. This anemia is usually of the normocytic type and young forms are very common and may occur in large numbers. The degree of the anemia varies with the clinical state of the leukemia and may be extremely high in the acute forms. Because of this close relationship to the leukemic process, it serves as the best guide to prognosis and treatment.

Enlargement of the spleen is characteristic of all types of anemia. The greatest enlargement takes place in the chronic myelogenous forms of leukemia, and least in the acute forms. It is chiefly due to leukemic infiltration. It is also believed that myeloid metaplasia of the splenic pulp takes place in myelogenous leukemia and that hypertrophy of the follicles occurs in the lymphogenous form. Naegeli is of the opinion that the spleen takes on an extensive extramedullary myelopoiesis which adds to the increase in size as well as accumulation of cells in the blood stream. The enlarged spleen, causing enlargement of the abdomen — or feeling of weight — is often the first complaint by the patient with myelogenous leukemia. Infarction, perisplenitis and thickening of the capsule are not uncommon in the enlarged spleen. Removal of the spleen is a doubtful procedure in leukemia, but there may be some instances, as in cases of hypersplenism, and great splenomegaly, when it may be justified.

Well over half of the patients with leukemia have an increased metabolic rate. It is invariably present in the acute process, and is infrequent in the chronic lymphogenous leukemia. There is a definite correlation between the height of the white cell count, the degree of immaturity of the cells, the pulse rate, and the increased basal metabolic rate. It is generally believed that this increased metabolic rate is due to increased oxygen consumption of the total cellular hyperplasia, and the many immature leukocytes. Protein bound, iodine blood values are near normal. Satisfactory response to therapy is reflected in a lowered metabolic rate. From a practical standpoint, this laboratory test is not used as a guide to treatment because the information necessary for this purpose can be gained by easier methods.

Fever is common in acute cases and in chronic cases during exacerbation. In the acute cases it may be quite high and follow a Pel-Ebstein Curve. It adds to the gravity of the prognosis. It is believed to be related to the increased basal metabolic rate, to disturbances in heat dissipation, and in many cases to secondary infection.

It is well recognized that the prognosis in leukemia is poor. But in spite of this gloomy outlook, the proper use of the expectancy of the individual case offers a great deal of help in the utilization of therapeutic measures that are available. The course is steadily progressive to a fatal conclusion. In the chronic cases, intermittent periods of fairly good health and spontaneous remissions are frequent. The average length of life after diagnosis, in the myeloid leukemia, is about three to four years. Rosenthal and Harris(3) reported the average duration of life to be two to three years, in a series of 455 patients. Many cases have been reported that have lived over ten years, and Naegeli reported one case that lived for 25 years after the diagnosis had been made. The immediate prognosis is favorable as long as the white blood cell count is not excessively high, fever is absent, anemia is slight, and no hemorrhagic tendencies are present. Patients with very high leukocyte counts die sooner than those whose white blood counts tend to average lower levels. A marked increase in the immaturity of the white blood cells makes for a poor prognosis. The immaturity of the white blood cells is a reliable guide in the prognosis, as the severity of the case is almost directly proportional to the degree of the maturity of the white blood cells.

The active and effective therapy in leukemia is comprised chiefly of the use of drugs, blood transfusions, antibiotics and irradiation. As stated previously these agents only palliate or arrest the disease. None is curative. Chemotherapy may well be used to simplify the treatment of the disease if it does not work to the therapeutic disadvantage of the patient.

The use of Fowler's solution (liquor potassii arsenitis) is probably the oldest method of treatment of leukemia, and still has an important place. It is known to decrease the hyperplasia of the leukopoietic tissues, and thus effect a reduction in the leukocyte count, with an increase in the red cell count. It may be tried in those cases in which there is not extensive hyperplasia of the leukopoietic tissues. It can be used advantageously between courses of radiation therapy, and may be given over long periods of time. It is well to remember that after arsenic has been given, or in fact any other maturation depressant, treatment with x-ray has to be carried out with greater caution. The converse seems to be true in some instances; namely, when irradation seems to lose its effect, Fowler's solution may bring about a remission. The mode of action of arsenic is somewhat obscure, but it may cause leukopoiesis to proceed along more normal lines, as is evidenced by decrease in activity of the myeloblasts in reproducing themselves and further by giving rise to more normal myelocytes. When the drug is given over long periods of time, signs of arsenical intoxication must be watched for. Anorexia, nasal congestion, conjunctival injection, nausea, headache, puffiness of the face, and diarrhea are usually early signs, while the late signs of intoxication are cirrhosis, keratosis, and neuropathological signs. Herpes zoster occasionally appears during the administration of Fowler's solution. There seems to be a difference in the susceptibility to arsenic intoxication. The usual starting dose is three drops three times a day, and this is increased by one drop daily until about 10 to 15 drops three times a day are given. The plan of treatment recommended by Kandel and LeRoy(4) is a satisfactory method of giving the drug. This calls for a 21-day cycle of increasing doses of solution of potassium arsenate, followed by an equal number of days of rest.

In 1946 Haddow and Sexton(5) reported the effects of urethane on tumors in experimental animals and later Patterson and others(6) used the drug in the treatment of human leukemia. Since that time Osgood and Chu(7) demonstrated by marrow culture technic of human marrow and leukemic human blood, marked change in the granulocytic cell series when exposed to urethane. The most significant of these changes seem to be an early increase in the number of normal mitoses in the progranulocytes and specific chromatin changes and increasing percentage of granulocytes and progranulocytes. This drug has its greatest field of usefulness in the treatment of chronic myelogenous leukemia and in these cases it will cause (1) a reduction in the number of leukocytes, (2) increase in the red blood cells and hemoglobin, (3) decrease in the number of immature cells, and (4) a diminuation in the size of the spleen. From a practical point of view one could safely start every case of chronic myelogenous leukemia on urethane and at the same time be reasonably certain that the best interests of the patient were being served. The effective dosage varies from 2-5 gm. daily and as a rule no remarkable changes are noted for about ten days. These patients may be carried on a maintenance dose of about ½ to 1 gm. per day of the drug for an indefinite period of time. The patient should be observed at regular intervals while under treatment and the blood examination, including the platelet count, should be made at these periods of observation. The toxic effects of the drug include anorexia, nausea, vomiting, and severe bone marrow depression. Thrombopenia occasionally develops, and it is always a serious complication. It is well to remember that the effect of any of the drugs in common use may affect in a quantative way, in different degrees, the thrombocytes, erythrocytes and the leukocytes. Furthermore, there is no way to predict these various reactions.

The nitrogen mustards, especially bis-beta-chloroethylmethylamine hydrochloride, does not have wide usage in the treatment of leukemia; but favorable results have been reported by Wintrobe and Huguley(8) in the treatment of cases of chronic lymphatic and myelogenous leukemia. Its effect in general is much like that which occurs from roentgen ray exposure. Cell mitosis is inhibited in the resting phase of the mitotic cycle. The mode of action is not clear but it is believed to be due to the inactivation of essential cellular enzymes and disturbances in cellular metabolism. The recommended dosage is 0.1 to 0.6 mg. per kilo. of body weight to be given daily for four to six days. The smaller dose is more desirable but may be increased as the case seems to warrant it. The drug is available in vials containing 10 mg. This is then mixed with 10 cc. of saline and the computed dosage is injected into the rubber tubing of a previously started saline infusion. Nausea and vomiting frequently follow, even some hours after the injection of the drug. If a suitable remission takes place it may be maintained by the injection of the minimal effective dose at intervals of two to four weeks.

Blood transfusion has a prominent place in the treatment of all types of leukemia. In practically all cases, some degree of anemia is encountered. It is generally looked upon as a myelophthistic type of anemia. The degree of anemia can be used as a prognostic sign. The anemia is best treated by blood transfusions as an adjunct to irradiation and drug therapy. It is better to use the transfusions early repeating the procedure as often as the red cell count and the condition of patient warrant it. Transfusion has other important effects than that exerted against anemia. It is believed that normal blood contains a maturation factor that exerts a favorable influence on the abnormal leukopoiesis. Thrombopenia, so commonly seen in acute leukemia, is best treated by repeated transfusions of fresh blood. The reduction in number of circulating platelets is counteracted at least temporarily by the transfusion. Finally, blood transfusion is beneficial in controlling the various infections so commonly seen in all types of leukemia. It is generally believed that fresh blood is more effective than preserved blood.

Radiation therapy continues to be the treatment of choice in the chronic forms of the disease. Roentgen ray, radium and radioactive phosphorus (P32) have proven beneficial. Each method has certain features that recommend its use but because of its widespread availability, its greatest practical feature, the x-ray irradiation will be the only one considered in this discussion.

In 1902 Pusey(9) reported for the first time, the use of x-ray in the treatment of leukemia. Since then it has been widely used in this disease. There are certain pertinent facts that we need to consider from the outset. The treatment should be administered only by a specialist who has a good knowledge of hematology. Factors of dosage are extremely variable, and a universal technic of administration has not been determined. It should be remembered that x-ray irradiation acts as a two-edged sword. It may, and often does, do harm. The optimum in therapy with this method would be the minimum amount of x-ray irradiation that will produce the greatest number of favorable changes. X-ray irradiation has no place in the treatment of acute leukemia, and very little application in the chronic cases in exacerbation. It is doubtful that x-ray actually prolongs life, but it does seem to bring improvement in general health and greater economic efficiency in most instances.

Its use should be dictated by total consideration of the patient rather than by the use of any one symptom or any one single laboratory finding. Early treatment is more effective and follow-up therapy is attended with better result, if it is instituted before the more serious signs and symptoms prevail. The presence of the leukopenic phase is not a contraindication to therapy, but such a case should be approached with greater caution. The same holds true for those cases showing hemorrhagic manifestations. X-ray irradiation often brings on dramatic change in those cases showing marked splenomegaly or lymphadenopathy, and occasionally either one of these conditions may offer the prime reason for therapy. Painful spleen is fairly common in chronic myelogenous leukemia. This symptom yields quite promptly to x-ray therapy. The biologic effect of the x-ray is not well understood, but the change in cellular maturation toward the normal is striking.

The treatment of acute leukemia has been unavailing, and until recently no therapeutic agent has altered the course of the disease. As stated before, irradiation therapy has no place in the treatment of this disease; in fact, it may produce very unfavorable results. The therapy that offers the most at the present time makes use of repeated blood transfusions, antibiotics, folic acid antagonists and hormonal substances. Repeated blood transfusions at relatively frequent intervals produce favorable effects by combatting the anemia, controlling to some extent the hemorrhagic tendency, and probably by supplying a deficient substance necessary for normal leukopoiesis. This process, Isaacs points out, may be favorably influenced by feeding raw potato, which supplies tryosinase. In a personal communication, Dr. Isaacs states that he continues the use of raw potato as an adjunct to treatment, with apparently good results. The bleeding tendency may be favorably influenced by protamine and toluidine blue, if other means of therapy have failed.

The use of antibiotics, such as penicillin in full dosage, is of value in combatting infection. These patients are very susceptible to infection and show poor immune response once infection does start. These drugs seem to be as effective in the patient with leukemia as they are in the normal individual suffering from an infection. In all probability the effect of the drug is not dependent upon the integrity of the leukocyte.

Remissions in acute leukemia have been produced by adrenal cortical extracts, cortisone and ACTH. Evans showed that adrenal cortical extract depressed the lymphocyte count in the experimental animal. Michaels and Richardson(10) obtained favorable temporary relief in a case of acute lymphatic leukemia by giving 2 cc. of the extract daily. They reported that the hematological features of the disease were wholly or partially controlled and most of the symptoms were modified by the treatment. In some instances a true remission was established and life was prolonged, but the good effects were not of long duration. Dameshek, et al(11) treated children with ACTH with apparent benefit. A sense of well-being and return of appetite and strength occurs within a few days. The spleen becomes smaller and the peripheral blood count tends toward the normal. No such remarkable changes, however, were noted in patients with myelogenous leukemia; and in cases of monocytic leukemia these hormones seemed to have a detrimental effect. However, Kinsell, et al(12) reported a case of acute monocytic leukemia treated with ACTH that had complete clinical and hematological remission after apparent aggravation of the symptoms in the initial phase of the treatment. Similar striking effects of a temporary nature have been observed in cases of acute lymphatic leukemia treated with cortisone. These remissions, however, are not lasting and there is apparent refractoriness to subsequent courses of therapy. In view of the fact that cortisone causes atrophy of the adrenal gland, while ACTH produces hypertrophy, it seems logical that these two compounds should be used in alternating series.

It was recognized that folic acid intensified the serevity of acute leukemia, and this observation led to the use of folic acid antagonists in the treatment of this disease. A preliminary report was presented by Farber, et al(13) in 1948, giving observations of the treatment of acute leukemia in children with aminopterin (4-amino-pteroyl-glutamic acid), a folic acid antagonist. Since that time several reports have appeared and different folic acid antagonists, chiefly aminopterin, amethopterin, and amino-an-fol, have been used. Favorable responses seem to have occurred in about 50 per cent of the treated cases. Some cases underwent complete clinical and hematological remission. These changes, unfortunately, are not lasting and sooner or later the patient succumbs. The effect of the drug is based upon the concept of biological competition of structurally related compounds. The dosage has to be carefully controlled because the margin of safety between the therapeutic and toxic effects is slight. The harmful effects occur more frequently in the younger than the older child. The lymphoblastic type of acute leukemia seems to respond more favorably than other types. The dosage is as yet on an empirical basis. The usual dosage of aminopterin, for children, is 0.5 to 1.0 mg. daily; and for adults, 1.0 to 2.0 mg. daily. It is believed that the dosage would be dependent upon the vitamin-antivitamin ratio. This, of course, is not known. The toxic manifestations are numerous, and this makes its use of rather doubtful value. The lesser toxic effects are stomatitis, diarrhea, loss of hair, and diffuse erythematous skin rash. Stomatitis and diarrhea are perhaps the earliest signs of toxicity. The effects on the bone marrow may be extreme, going on to high grade aphasia and irreversible changes. The treatment seems somewhat heroic, but the very fact that it has in many instances reversed the course of this serious disease is indeed challenging.

In conclusion I would like to direct attention to the outstanding fact that remissions in acute leukemia, a neoplastic disease, have been produced by different active therapeutic measures. It is the great hope that out of the experimental work being done in so many fields, even though progress is slow, some day a cure will be found. If our present therapy results in failure, we at least have acquired a better understanding of the nature of the disease.

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Newer Drugs in the Treatment of Epilepsy*

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Any clear and concise discussion of this subject would require a few words about epilepsy itself. Epilepsy, of course, is not a disease but is a symptom, and because it is a symptom, the etiological factors behind the convulsive disorder must be discussed. Then again, epilepsy is a term which is usually used only to describe a grand mal convulsive disorder, however petit mal, psychomotor seizures, jacksonian fits and diencephalic epilepsy must all be considered as convulsive disorders as well. Each in turn is the result of focal irritation somewhere in the cerebral cortex or basal ganglia and the symptoms which are produced are characteristic of the irritated section of the brain. For example, if the source of hyper-irritability involves either directly, or through its radiation the motor cortex, grand mal convulsions ensue. If, however, the irritability came in the frontal lobe or the posterior part of the parietal lobe, one might expect a petit mal type of convulsion. If, however, the defect is in the temporal lobe, it is not at all unusual for the individual to have psychomotor seizures, or to have seizures with an aura involving the auditory system. If the lesion is in the occipital lobe, or in regions adjacent to the occipital lobe, the aura may have visual hallucinations, organized or disorganized in character. At times, indeed, the irritative factor may be found in the diencephalon, and such patients will simulate, briefly at least, an acute abdomen and will show bizarre emotional disturbances.

It has even been considered by some that certain areas of focal irritation in the cortex are responsible for certain types of migrane. From the standpoint of an irritated focus, it must be remembered that in patients with an epileptic disorder (any convulsive disorder) the nerve cells are more irritable than in a normal brain, and this hyperirritability is easily demonstrated on the electroencephalograph.

If one remembers that normal functioning of the brain requires the transmission of impulses from one neuron through its dendrites or through its axons in connecting pathways in the cortex to other neurons and their dendrites, one can see that, if this particular irritability is aggravated, it would take less stimulus to produce the radiation of impulse. The radiation of the impulse is through the cortex directly rather than through connecting pathways, and it simulates the radiation of the circle of water which follows dropping a stone in a bucket. The type of lesions which produce this irritability are at times amenable to surgery or to medical approach. About 10% of the cases of convulsive disorder have a demonstrable cause which can respond to methods other than the palliative treatment that we are about to discuss. For that reason, it would seem wise in the diagnosis of an epileptic disorder to give the patient a complete work-up in order to determine whether or not the etiological factor can be removed. I believe that a patient who comes in for treatment for an epileptic disorder should have a complete physical as well as a complete neurological examination, followed by x-rays of the skull in four positions stero. This should be followed by a spinal puncture as a minimal procedure. If anything at all suggestive is found, an angiogram or a pneumonencephalogram should be done, this to be followed by an electroencephalogram. Very frequently the irritative focus may be found and removed surgically and thus remove the patient, not only from the field of epilepsy, but from the anxiety that goes with it. Point of caution, pneumoencephalography should be avoided if possible, because terrific headaches usually ensue. It is, however, sometimes necessary, and is a most valuable diagnostic factor in determining etiology of epilepsy.

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*Read before the Omaha Mid-West Clinical Society, October, 1950.

The electroencephalograph, which is rapidly becoming more and more popular, especially as we learn more and more about it, may in the future prove to be much more valuable agent in the diagnosis of various types of convulsive disorders than it has been in the past. When the type of lesion producing the convulsive disorder is not discovered, or it proves unamenable to surgical approach, the convulsive disorder may be controlled by lessening the conductivity of nerve cells, which is to lower the irritability of nerve cells and their neurons to the point that the irritative focus does not effect adjacent parts of the brain except through normal channels. If the radiating wave of an irritable focus may be prevented from constant consecutively triggering off different areas of the cortex, then the disease may be controlled from a symptomatic rather than from a curative standpoint.

It has been hoped throughout the years that chemical substance could be found which could be somewhat selective in attacking the different areas in the cortex, since the different parts of the cortex have different types of cells with different histological and physiological characteristics. All of the drugs, which have been used in the treatment of epilepsy, are aimed at depressing the irritability of these nerve cells and to a certain degree there has been some selectivity. Bromides were the first drugs which were of any real value in handling epileptic convulsive disorders. Bromides are seldom used today because of the many disagreeable side effects and its danger in producing toxic psychoses. However, they are not to be ignored because of their extreme value in controlling some types of otherwise intractable petit mal. About 35 years ago Luminal was discovered by the Germans and was brought to this country. It was found to have even more effective control of convulsive disorders than the Bromides, though certain cases respond better to Bromides than to Luminal. Luminal, Phenobarbital, still is used as an augmenter for the other, usually more effective anticonvulsive drugs.

The new drugs, Dilantin, Tridione, Mesantoin and Phenurone, it must be remembered are merely refinements of the drugs which preceded them, in that they were more selective in their action and had fewer side effects in some cases. There are several others which we have not mentioned, but which are used so seldom that they are not really worth while mentioning to any great degree. Phenobarbital, Dilantin, Tridione, Mesantoin, Phenurone and Thiantoin are each quite complex chemical substances and contain phenol rings in their chemical formulas. Phenol rings frequently have a direct effect on bone marrow and for that reason a certain number of the cases may develop an aplastic anemia. For this reason, a patient should be checked before the drug is given, in so far as the blood picture is concerned as well. Then at regular intervals his blood picture should be checked again. During the first three months of the treatment, the patient should have his blood picture checked once a week and thereafter at least once a month for a year. If no trouble ensues, frequent examinations may be made with some safety and they can be gradually spread farther and farther apart.

Of the more recent drugs, Dilantin has proved to be by far the safest and the most effective in handling the greatest number of cases. This is true especially of the grand mal type of convulsive disorder. The use of Tridione, which has some side effects, has been quite effective in reaching some of the petit mals that Dilantin does not reach. Unfortunately, Tridione produces central type of blindness in a fair percentage of patients. This blindness is so annoying and disagreeable to the patient that the drug must be discontinued when the patient starts to complain of glare in the center of his vision, and of inability to stand bright light followed by a blind spot in the central field of vision. Then, perhaps, we will have to fall back on the old standby in the Bromide group. Both Tridione and Mesantoin have clinically produced more side effects than does Dilantin and, therefore, more care should be observed in administering them.

The new drug, Phenurone, is supposed to be the most effective of all the anticonvulsants, though, as yet, it has not been definitely established as effective in a hundred percent of the cases. It has some side effects which have not been completely explored. There have been at least two deaths from the use of Phenurone due to its effect on bone marrow. One case reported by Merritt, et al developed a leukopenia and 34% of the series developed gastro-intestinal symptoms that ultimately required discontinuing the drug.(1) Davidson and Lennox reported essentially the same results but called attention to the fact that liver damage was a contraindication to the use of the drug. He, however, lauded the psychomotor effect and in psychomotor seizure, said that it was a drug which is capable of helping over 50% of the cases. It must be remembered that psychomotor seizures have been particularly resistant to anticonvulsive therapy.(2) Another case of liver and renal damage with renal death was reported by Levy and his group. Theoretically, at least, and in practice for a certain number of cases, Phenurone has been stated to so effectively control convulsions that it will stop the convulsion of electric shock therapy.(3)

Thiantoin Sodium, which was introduced only in the spring of 1950 by Lilly and Co., is a drug very similar to Dilantin, but is supposed to be somewhat more effective in controlling combined seizures. It is soluble in water and alcohol, and for that reason can be given as a liquid. This makes it much more effective in children. Further clinical observation will demonstrate its real worth.

In summary epilepsy is not a disease, but a symptom of focal irritation and, if possible, the localization and the cause of that irritation should be determined. If this proves beyond the ability of modern diagnostic methods, the use of drugs to render less irritable the cortical cells can be used. Bromides and Phenobarbital are rapidly being replaced by the newer drugs, Dilantin, Mesantoin, Tridione and Phenurone. The use of these four drugs must be carefully controlled, because of the danger to bone marrow. Continued tests must be made of the patient's blood system for a period of many years after the onset of the administration of the drug.

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BUY U. S. DEFENSE BONDS

The Use of Iodine in Toxic Goitre

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The beneficial effect of iodine administered to a patient with hyperthyroidism has been known since 1820 when Coindet(1) of Geneva published his observations on this subject. He is credited with being the first to knowingly recognize the response of goiters to iodine therapy. It was not until after Plummer(2) published his first paper in 1923 that iodine was generally recognized as a specific aid in the management of hyperthyroidism. Numerous studies have been done since in the clinics of Means(3) and others which have fairly well established the expectations and limitations of massive iodine therapy in toxic goiter.

A survey(4) of the treatment of goiter at the University of Nebraska Hospital during the past 15 years was made recently. The effects of iodine therapy in these cases as measured by the basal metabolic rate are summarized in the table below. The goiters were classified as either diffuse or nodular and each group was then sub-divided as follows: Those with a BMR of over plus 60 per cent on admission were considered severely toxic, those with a BMR ranging from plus 21 to plus 59 per cent were considered moderately toxic and those with a BMR of plus 20 per cent or less but presenting toxic symptoms were considered borderline toxic.

RESPONSE OF TOXIC GOITER TO IODINE THERAPY

		BASAL METABOLIC RATE		
	No. of Cases	Admission	After Iodine	Average Reduction
No Iodine Before Admission:				
Diffuse severe	31	+68	+36	32
Diffuse moderate	50	+45	+23	22
Diffuse borderline	3	+20	+ 1	19
Nodular severe	16	+70	+51	19
Nodular moderate	61	+40	+30	10
Nodular borderline	10	+16	+11	5
Iodine Therapy Before Admission:				
Diffuse severe	6	+70	+55	15
Diffuse moderate	27	+41	+29	12

Intensive iodine therapy was used preoperatively in more cases than were included in the above table but only those cases in which the laboratory studies were complete were used for this data. The initial BMR was determined in most cases one or two days after admission and usually after one or two days of bed rest, sedation and massive iodine therapy.

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In this series, intensive iodine therapy produced the greatest response in the diffuse type of toxic goiter and the greatest effect was apparent in the most toxic cases. Those patients who had taken iodine for long periods of time before hospital admission showed less response to additional iodine therapy than did the patients who were given iodine for the first time.

In this series, seven of the eight patients who died in crisis post-operatively had taken large doses of iodine for long periods of time before entering the University Hospital. Five of the patients had taken Lugol's solution continuously for 4 to 36 months and the other two cases had taken Lugol's solution for long periods of time but had taken none for 2 to 4 months before entering the hospital. There have been no deaths from crisis in this hospital since 1941.

The eight cases who died in crisis post-operatively were classified as follows: two were considered to be diffuse and severely toxic, one was nodular and severely toxic, four were nodular and moderately toxic and one case presented a recurrent goiter which was moderately toxic.

DISCUSSION

Intensive iodine therapy produces a marked reduction of the basal metabolic rate in all types of toxic goiter. It is probable that most cases of mild or borderline hyperthyroidism can be prepared for surgery economically and successfully by this method alone. Assuming that complete intestinal absorption occurs, it has been found that 6 mgm. of iodine (contained in one drop of Lugol's solution) will produce a maximal daily decrease in the metabolic rate of hyperthyroid patients. Larger doses of Lugol's solution are usually used.

The anti-thyroid drugs should be given pre-operatively to the moderately toxic and severely toxic cases of hyperthyroidism. These drugs should also be given preoperatively to all cases of hyperthyroidism who have taken iodine for long periods of time or those cases of mild hyperthyroidism who present complicating conditions such as heart disease, diabetes, etc. Bartels(5) found no instance of crisis or thyroid storm in 1900 cases of hyperthyroidism treated preoperatively with the anti-thyroid drugs. Propylthiouracil given in daily doses of 300 mgm. is considered the best of the anti-thyroid drugs available today. The patient should be maintained in an euthyroid state for several weeks before surgery is done.

Prolonged administration of the anti-thyroid drugs produces hyperplasia of the thyroid and it also increases the vascularity of the gland. These effects are minimized and subsequent thyroidectomy is easier and safer if iodine in large doses is given concurrently with the anti-thyroid drugs during the last few weeks before the surgery is done.

Several investigators have reported recently their experiences in treating hyperthyroid patients with iodine and the anti-thyroid drugs concurrently and in maintaining both medications throughout the entire preoperative period. Bartels(6) found that the physical signs and the symptoms were controlled more quickly if the drugs were used together than if the anti-thyroid drugs were used alone. The response to the anti-thyroid drug was somewhat slower but he was of the opinion that in most cases this was of no real importance. He felt that cases of primary hyperthyroidism presenting large diffuse goiters should not be treated in this manner because in this type of case the response to the anti-thyroid drugs was too much delayed. The latter group of cases were given iodine only during the last two or three weeks of preoperative anti-thyroid therapy.

Dinsmore and Schneider(7) found that the thrill and bruit frequently present with hyperthyroidism diminished rapidly if 10 to 30 mgm. of iodine (2 to 5 drops of Lugol's solution) was given daily concurrently with the anti-thyroid drugs. They found no significant difference in the rate of reduction of the BMR to anti-thyroid drugs when iodine in these small doses was used.

CONCLUSIONS

1. The administration of Lugol's solution effectively reduces the basal metabolic rate of hyperthyroid patients. The effect is greatest in the most toxic cases and in the diffuse type of goiter.

2. The hyperthyroid patient after receiving iodine for long periods of time shows a much poorer response to intensive iodine therapy than the hyperthyroid patient who is given this medication for the first time. In this series, seven of the eight patients

who died in crisis postoperatively had taken iodine for long periods of time before entering the University of Nebraska Hospital.

3. It is probable that all cases of mild or borderline hyperthyroidism who otherwise are in excellent health can be prepared for surgery adequately and economically with intensive iodine therapy alone.

4. All cases of hyperthyroidism, other than the good risk patients in the borderline toxic group, should receive anti-thyroid medication in adequate doses prior to surgery. Recent studies indicate that small doses of Lugol's solution (e.g. one drop three times a day) given in conjunction with the anti-thyroid drugs produces a more rapid improvement in the hyperthyroidism than if the anti-thyroid drugs were used alone. Apparently, iodine given in small doses does not delay appreciably the response of hyperthyroidism to anti-thyroid medication.

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REVERSIBLE BIFOCALS NEWEST DEVELOPMENT IN EYE GLASSES

A new type of eye glasses which allows the bifocal portion to be moved out of the way when not needed is described by Dr. David E. Rolf of Cleveland in the April Archives of Ophthalmology, published by the American Medical Association.

According to Dr. Rolf, the lenses of the glasses may be rotated, or turned upside down, by a unique method of attachment, so that the bifocal part is on top instead of on the bottom. In his opinion this reversible lens arrangement has certain advantages. He said:

"It's flexibility will save many patients an extra pair of glasses. It offers a possible solution to the long-standing problem of the patient who cannot accustom himself to walking while wearing bifocals in their usual position. It also permits the bifocal segment to be placed upward and out of the way during all or part of his walking activities. It would also seem applicable for patients engaged in occupations with unusual visual demands. Patients in these categories include barbers, switchboard operators, painters and paper hangers, as well as most people employed in the building trades, where sure footing is a necessity."

Dr. Rolf believes that the mechanics of changing the position of the lenses are sufficiently simple so that most persons are able to master them easily. He said there are no limitations regarding size, shape or type of bifocals or trifocals that can be used and the technic of prescribing and fitting these lenses is not difficult.

ABILITY

Fenestration has brought increased hearing ability to 70 per cent of a group of deafened patients, according to a report in the April issue of Archives of Otolaryngology, published by the American Medical Association.

The patients were suffering from otosclerosis, according to Drs. Louis E. Adin, Jr., of Dallas and George E. Shambaugh, Jr., of Chicago.

The operation was performed on a series of 390 patients from 1940 to 1945 and results have now been observed from five to 10 years.

Seventy per cent of the patients received a "significant hearing improvement and have maintained it." Twenty per cent lost a part of their initial gain but still have a usable level of hearing. Five per cent had no hearing improvement at all and another five per cent had bony closures of the opening.

The authors observed that the older patients seemed to do better than the younger ones. Only 50 per cent of the four patients under 20 obtained hearing gain that was maintained. By contrast, 100 per cent of the 7 patients over 60 obtained and maintained a hearing gain. The doctors emphasized, however, that too few patients were included in this older group to warrant any definite conclusions as to the importance of the age factor in this operation.

The current medical literature indicates a wide search for substitutes for cortisone and ACTH. An acceptable substitute should combine therapeutic activity with fewer side effects and reduced cost of treatment. Several such compounds warrant consideration. A favorable report by Lewin and Wassen in November, 1949, on the combined effect of desoxycorticosterone acetate and ascorbic acid in nine patients with rheumatoid arthritis stimulated the interest of other investigators. While some of these confirmed Lewin and Wassen's findings, others reported such therapy to be of little benefit. "Our observations coincided with the latter view," Dr. C. R. K. Johnston of the Cleveland Clinic told the physicians at the seventh annual meeting of the American College of Allergists. "We have found, in our experience, that a low salt diet combined with large doses of vitamin C is of apparent value."

Dr. Johnston stated also that an acceptable substitute for ACTH and cortisone should combine therapeutic activity with fewer side effects and reduced cost of treatment. He stated that although here was a great deal of work being done on this phase of the problem, there is at the present time no acceptable substitute for cortisone or ACTH.

The Nebraska State Medical Journal

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Federal Securities Building, Lincoln, Nebraska

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Subscription $2.50 Per Year. Single Copies 35c Each

The Publication Board does not assume responsibility for opinions expressed in original articles published in this Journal.

Manuscripts should be typewritten, double-spaced, and the original, not the carbon, submitted.

Reprints should be ordered from the printer, The Huse Publishing Co., Norfolk, Nebraska.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

Vol. 36 June No. 6

THE A.M.A. TWELVE POINT PROGRAM

1. Creation of a Federal Department of Health of Cabinet status with a Secretary who is a Doctor of Medicine.
2. Promotion of medical research through a National Science Foundation with grants to private institutions which have facilities and personnel sufficient to carry on qualified research.
3. Further development and wider coverage by voluntary hospital and medical care plans to meet the costs of illness, with extension as rapidly as possible into rural areas.
4. Establishment in each state of a medical care authority to receive and administer funds with proper representation of medical and consumer interest.
5. Encouragement of prompt development of diagnostic facilities, health centers and hospital services, locally originated, for rural and other areas.
6. Establishment of local public health units and services.
7. The development of a program of mental hygiene with aid to mental hygiene clinics in suitable areas.
8. Health education programs administered through suitable state and local health and medical agencies to inform the people of the available facilities and of their own responsibilities in health care.
9. Provision of facilities for care and rehabilitation of the aged and those with chronic disease and various other groups not covered by existing proposals.
10. Integration of veterans' medical care and hospital facilities with other medical care and hospital programs and with the maintenance of high standards of medical care.
11. Greater emphasis on the program of industrial medicine.
12. Adequate support with funds free from political control, domination and regulation of the medical, dental and nursing schools and other institutions necessary for the training of specialized personnel required in the provision and distribution of medical care.

Organization Section

SPRINGDALE CAMP

The Diabetes Committee of the Nebraska State Medical Association has added still another project to its year's work. On May 17, it announced through the press and radio the establishment of a new camp for the state's diabetic children, to be known as Springdale Camp. It will be held this year from June 10-23 at the Girl Scout camp in Nebraska City.

Operated as a non-profit corporation, Springdale Camp has three main objectives:

1. To give the diabetic children instruction regarding the nature and control of diabetes.

2. Provide a healthful and happy camping experience.

3. Give the parents of these children a small measure of freedom from their constant responsibilities and at the same time provide a safe, "first escape" for children from parental care.

Along with the state medical association, the camp has received the active support of the State Department of Health, University of Nebraska, Creighton University and Boy Scout and Girl Scout officials. It is the official camp of the West Central Diabetes Association.

The camp's medical problems and instruction in regard to diabetes will be in charge of Drs. Floyd Rogers, Lincoln; Michael Crofoot, J. A. Pleiss, and Morris Margolin, Omaha. Dr. Margolin is Chairman of the Diabetes Committee and President of the West Central Diabetes Association. The first three physicians are also on the corporation's board of directors along with Mr. C. H. Roper, Mr. Herman Siefkes and Mrs. E. A. Frerichs of Lincoln.

Fee for the camp is $25 per week, but the committee has announced that provisions can be made for those children who cannot meet this expense. The committee does not want to deprive any child of the benefits of this camp simply because he has insufficient funds.

Dr. Ruth Leverton of the University of Nebraska, will be the food therapeutist and will conduct daily classes in nutrition, food planning and substitution. Miss Anna Smrha, food economist of the State Department of Health, will serve as foods director and general camp director. An interne and graduate nurse will be at the camp during the entire two-week period. Camp activities will be planned by scout directors.

The camp is open to all children between the ages of nine and 15. Camp facilities will handle 30 boys and girls. Fifteen of each will be taken. If you know of diabetic children who would like to attend this excellent camp, please have them make application to the Springdale Camp Association, 605 Federal Securities Building, Lincoln.

This camp is another project of an active medical profession, demonstrating again that it can find the solutions to its own problems.

RURAL MEDICAL SERVICE

The Rural Medical Service Commitee, under the chairmanship of Dr. Earl Leininger, is developing an extensive program of service for the rural areas of Nebraska. At the present time it has outlined a three-point program, of which one point is already being put into motion.

Recognizing the need for a state-wide school children immunization and examination program, the committee has now developed such a plan, with the cooperation of the State Superintendent of Public Instruction. Very shortly, health forms will be sent by the state superintendent to all county superintendents. A cover letter will be sent along with the form, urging strongly that all children be immunized and examined by their family physicians before entering school. The form is to be completed by the family doctor.

The committee realizes that many communities in the state have similar programs. This plan is not intended to disrupt those programs, but rather is aimed at helping all communities to adopt an examination-immunization activity of their own. At the same time, the committee's plan places the responsibility where it belongs — in the hands of the medical profession.

Point No. 2 of the program lies in the recruitment of nurses, especially for the rural areas. Although the committee has adopted a plan which it feels would help materially in supplying more nurses, particularly "practical" nurses, for the rural areas, announcement of it must wait until its practicability has been fully established. It can be noted, however, that the plan calls for the utilization of appropriate hospitals over the state for training nurses.

Point No. 3 was authorized by the House of Delegates last month. Starting next year, the committee will sponsor a pre-graduation day ceremony for the seniors of both medical schools. During the one-day program, these medical students will be honored by the association and at the same time advised as to the overall aspects of rural practice. It is felt that in this way more physicians can be encouraged to practice in the rural areas, thereby eliminating one of the most frequent criticisms of the profession.

News and Views

The following officers were elected at the annual meeting of the Nebraska Chapter of the American Academy of General Practice:

President—Harvey D. Runty, M.D., DeWitt.

Vice President—Herman V. Nuss, M.D., Sutton.

President-elect—John A. Brown, M.D., Lincoln.

Secretary-Treasurer—W. E. Hungerford, M.D., Omaha.

Board of Directors—Charles W. Way, M.D., Wahoo; J. P. Gilligan, M.D., Nebraska City; Frank J. Mnuk, M.D., Omaha; Glen D. Whitcomb, M.D., Omaha; Don E. Baca, M.D., Papillion; Floyd C. Nelson, M.D., Omaha; Herbert D. Kuper, M.D., Columbus.

Delegates—Paul S. Read, M.D., Omaha; W. Max Gentry, M.D., Gering. (Dr. Gentry has indicated that he will not be able to serve so this place will have to be filled by appointment).

Alternates—A. W. Anderson, M.D., Lexington; Paul J. Heidrick, M.D., Lincoln.

Secretary-Treasurer—W. E. Hungerford, M.D., Omaha.

The following committees were appointed by the Board of Directors at their last meeting:

Program—Neill J. Everitt, M.D., Omaha, Chairman; Clarence R. Brott, M.D., Beatrice; Kenneth D. Rose, M.D., Lincoln; Lumir Pucelik, M.D., Plattsmouth.

Educational—Thomas D. Fitzgerald, M.D., Omaha, Chairman; Elmer W. Bantin, M.D., Omaha; Robert J. Stearns, M.D., Omaha; Matt Severin, M.D., Omaha.

Credentials and Membership—John P. Gilligan, M.D., Nebraska City, Chairman; Wm. E. Wright, M.D., Creighton; Wm. J. Gentry, M.D., Gering; Arnold McDermott, M.D., Omaha; Russell T. Smith, M.D., Lincoln.

Hospital—Paul S. Read, M.D., Omaha, Chairman; John M. Christlieb, M.D., Omaha; Adin H. Webb, M.D., Lincoln; Joseph P. Drozda, M.D., Omaha; Alfred C. Andersen, M.D., Omaha.

Constitution and By Laws—Walter Benthack, M.D., Wayne, Chairman; Clarence M. Hartmann, M.D., Omaha; Thomas W. Torpy, M.D., Omaha; Oscar E. Liston, M.D., Elmwood.

Publicity—Clarence F. Bantin, M.D., Omaha, Chairman; Albert F. Taborsky, M.D., Lincoln; George E. Place, M.D., Lincoln; Benjamin F. Ewing, M.D., Omaha.

Liaison—Albert A. Ashby, M.D., Geneva, Chairman; Arthur J. Offerman, M.D., Omaha; Donald B. Steenburg, M.D., Aurora; Rolland R. Brady, M.D., Ainsworth.

Resolutions — Robert A. Harry, M.D., York, Chairman; Harvey B. Stapleton, M.D., Hickman; Richard W. Homan, M.D., Crete.

New members since the annual meeting: H. F. Staubitz, Omaha; Richard F. Brendel, M.D., Plattsmouth; Leonard J. Chadek, M.D., Tecumseh; Charles A. Longo, M.D., Omaha; James G. Allen, M.D., Tekamah; Lyman J. Cook, M.D., Omaha; Isaiah Lukens, M.D., Tekamah; Charles H. Sheets, M.D., Cozad.

Dr. Walter E. Nowers, formerly of Hastings, died April 17th in Long Beach, California. Dr. Nowers was a native of Nebraska, a graduate of Creighton University School of Medicine in 1908.

Dr. G. Lee Sandritter, formerly Assistant Superintendent of Norfolk State Hospital, has assumed duties as Superintendent of the Hastings State Hospital at Ingleside in May. Dr. Sandritter is well known to all of us. He has done much to promote the mental hygiene movement in this state and this Journal is happy to see Dr. Sandritter move up. We congratulate him and we know that he will continue to do good work in his chosen field.

Sessions of the American Heart Association will be held in Atlantic City, N.J., from Wednesday, June 6 to Sunday, June 10, 1951, at the Haddon Hall Hotel.

The annual dinner on Saturday, June 9, will feature the presentation of Gold Heart awards to physicians who have made outstanding contributions in advancing cardiovascular medicine and the program of the American Heart Association.

The American Council on Rheumatic Fever of the American Heart Association, composed of representatives of twelve national voluntary health agencies interested in this phase of cardiovascular disease, will hold its annual meeting Sunday, June 10.

The Woman's Auxiliary

PRESIDENT'S ADDRESS

Annual Meeting, May 3rd, 1951

Now, as we are about to end a year and look to another year for our Auxiliary, I realize more than ever the responsibility and work assumed, when I took over the Presidency, as well as all of the work done in the past years by all who preceded me.

This has been a most important year due to the election, results of which, have been most favorable to our parent organization, our Medical Society. This has served as the basis of work done throughout the year. As your Nebraska State President, I have stressed in all my talks to those County Auxiliaries throughout the State, the need for unity and strength and good going, well organized Auxiliaries. As I have quoted, so many times in speaking, and repeat, "We strive for growth in numbers of members, and, in achievements. The outstanding objective of the Auxiliary is to unify the efforts of all individual members. It is this unification which brings strength to our Auxiliary."

It has been my objective to stress in Nebraska, the building up of already organized Auxiliaries as the making of a more powerful organization.

Reports from our own County Presidents will speak for themselves of earnest endeavor, enthusiasm and work accomplished. May I quote from "Medical Economics," January 1951, "America's medical men were rank amateurs in politics — but, look what happened."

Therefore, with unity and influence from our own County Auxiliaries throughout the State, we, in Nebraska have had our part toward the work in the national set-up, as laid out by our doctors.

It is the Woman's Auxiliary, working as it does, with the Medical Professional which will help bring about the understanding thought of the lay people, to look with knowledge for freedom in medicine, as represented by the Voluntary Health Plans.

The Auxiliary to the Nebraska State Medical Association has 14 organized auxiliaries functioning in 41 counties. There are 490 members.

Meetings attended by your President:

May 3, 1950—Presided at Post Executive Meeting, Lincoln, following the Annual State Meeting.

May 4—Honored with introduction as President of the Auxiliary to the First Joint Session of the Nebraska State Medical Association and the Woman's Auxiliary.

May 22—First meeting of newly organized Interim Committee, held at home of President.

June 25-29—Attended the 27th annual meeting of the Woman's Auxiliary to the American Medical Association in San Francisco, California.

Sept. 12, 10 a.m.—Attended Essay Contest Committee Meeting. 1 p.m.—Had first official board meeting of the Woman's Auxiliary to the Nebraska State Medical Association. Attendance was well represented through the state, with 25 members present.

Sept. 22—Guest speaker at a noon luncheon meeting for the wives of doctors attending the Academy of General Practice in Lincoln, Nebraska.

Sept. 27—Guest speakere at a joint meeting of the Tri-County Medical Society and the Woman's Auxiliary, Fremont, Nebraska.

Oct. 10—Guest speaker at Omaha Douglas County Auxiliary. Membership tea meeting.

Oct. 25—Attended Essay Committee Meeting, Omaha, completing plans for Essay Contest.

Nov. 2-3—Attended the 7th Annual Conference of the State Presidents of the Woman's Auxiliary to the American Medical Association, Chicago, Illinois. I was guest speaker on a panel discussion topic, "Nebraska Self Education."

Jan. 25, 1951—Toured across state to Scottsbluff. Guest speaker at Scottsbluff Auxiliary. This was a needed visit for encouragement and inspiration. This was the first time an Auxiliary president had visited this Auxiliary since they were organized.

Febr. 5—Spoke at luncheon meeting at Lancaster County Auxiliary at Lincoln.

Febr. 18—Suffered a very bad fall on my own front walk, a fractured wrist in cast for 6 weeks. Activities were somewhat curtailed during this time.

April 11—Traveled to Grand Island to speak before Tri-County No. 3. This was a most important meeting, as the continuance of this organization hung in the balance. That this recently re-organized group decided to continue, after my visit there, was a real stroke for continued organization. Good luck to the Grand Island Tri-County No. 3 group.

Sunday, April 15—It was with regret that I had to cancel plans to accept the kind invitation for visiting the 8th Council District at Ainsworth, Nebraska, when they had the dinner meeting with their doctors.

April 24—Attended at Nebraska City a dinner meeting of the Auxiliary and doctors of Nemaha and Otoe Counties, following which I was guest speaker to the Auxiliary meeting.

Innumerable letters and telephone calls have been made throughout the year, locally and nationally, carrying on the work of the Auxiliary.

Outlines and instructions have been sent out by innumerable letters to all County Presidents and Board Members throughout the year.

Was responsible for personal letters to every doctor's wife througout the state urging them to be active in Auxiliary work.

Each Auxiliary has been supplied with all available literature, personally distributed by your President, to the County Auxiliaries visited.

Forty-five resolutions from Nebraska, which have come from actively working Auxiliary members. Also 15 pins were sold.

The highlights of this year's work was the active working together as individual American citizens to bring to the lay people the true knowledge of the campaign issue, "Compulsory Health vs. The Voluntary Health Plan" and Freedom in Medicine. We have accepted our responsibility with the result achieved in the victory for our doctors in the last election.

It is a great privilege and honor to have served as your President this last year. The Executive Board this year has given splendid support and help. May I extend personal thanks to each and every one of you, the Officers, Directors, and all Chairmen of Standing Comittees. To Mr. Merrill Smith, Executive Secretary, and Mrs. Ruth Murphy, in the Secretary's office, I want to say, "Thank you." They have been splendid in answering my many questions and most courteous in help that came out of their office.

To my Advisors: Doctors C. R. Williams, R. A. Moser, and last, but far from least, my own good husband, Dr. Glenn D. Whitcomb. Thank you for your advice, counsel and confidence.

To Dr. Sheets, our State President, may I say it has been a great pleasure to serve the Auxiliary in his year as President of the Nebraska State Medical Association.

In conclusion, I wish to thank again each and every one of you who have given me whole hearted support and confidence in a year filled with work. May my successor, your newly elected President, receive the same staunch support from you. God speed you all in the year ahead. I thank you.

MRS. GLENN D. WHITCOMB,
President Woman's Auxiliary,
Nebraska State Medical Assn.,
1950-1951.

It is difficult to decide where to cast the spotlight in reporting the many activities of the convention held in Omaha April 30, May 1, 2, and 3. The specially-planned joint events provided occasion to mingle with the wives and their doctor husbands from all over the state. The business sessions provided an opportunity for reviewing past year's accomplishments of the auxiliary, and for establishing new goals for the future.

An auxiliary highlight was Mrs. Theodore E. Heinz, National Auxiliary Public Relations Chairman, of Greeley, Colorado. Mrs. Heinz spoke to us at the style-show luncheon on Wednesday and also at the joint luncheon meeting on Thursday. Imparted not only inspiration, but also many practical suggestions based on an impressive record of experience in positions of leadership in women's organizations.

Following a review of the achievements of voluntary health insurance plans by Dr. Arthur J. Offerman, Thursday morning's workshop was devoted to a discussion of the problem of shortage of nurses. Mrs. Catherine Gehrman, Executive Director of the Nebraska State Nurses Association, and Mrs. Charlotte Schultz, Chairman of the Student Nurses Recruitment Committee for the state of Nebraska, outlined for us their program of nurse recruitment and informed us about nurse scholarship funds. It was also pointed out that we can cooperate in the field of civil defense by supplying instructors for home nursing, nurse aid, and first aid courses, and by taking a course in "The Nursing Aspects of Atomic Warfare."

All who contributed in any way towards the auxiliary-sponsored Essay Contest, "Medicine's Role in Preserving the American Way of Life," were justly proud of its outcome when Miss Barbara Jones, Hastings, won the hearts of her audience by her reading of the winning essay. At this joint luncheon meeting we were also privileged to hear Dr. John Cowling's address, "Our American Heritage," wherein he forcefully defended our democratic principles which safeguard the basic liberties of the individual.

It seems fitting to conclude with the following resolutions, which were passed at the annual session Wednesday morning, during which Mrs. Glenn D. Whitcomb presided:

"Be It Resolved, that we, the members of the Woman's Auxiliary to the Nebraska State Medical Association, assembled in Omaha in annual meeting, express our gratitude to:

1. The president and officers of the State Medical Association for a very successful year and for their many hours spent, miles travelled, and efforts directed to stimulate interest among the doctor's wives.

2. Douglas County Auxiliary for its gracious hospitality during the convention.

3. Mrs. L. W. Lee, President of Douglas County Auxiliary and General Chairman of the Convention Arrangements and her assistants, for their efforts on our behalf.

4. Officers, delegates, and members of the State Medical Association and Douglas County Medical Auxiliary for their many courtesies, including their financial assistance.

5. The management of the Paxton Hotel which served us as auxiliary headquarters.

Be It Resolved, that, we the members of the auxiliary to the Nebraska State Medical Association, pledge our support to the incoming president.

Be It Further Resolved, that these resolutions be printed in the Journal of the State Medical Association and be included in our minutes.

MRS. G. KENNETH MUEHLIG.
Chairman, Press and Publicity.

The Auxiliary met at the home of Mrs. Lear, where the results of the Essay Contest were discussed, as was the program of the State Medical Convention in Omaha in May. Preceding the meetings, the group met for dinner at the Steak House.

MRS. WM. D. LEAR.
Publicity Chairman.

The Scotts Bluff County Medical Society and Auxiliary met for dinner at the Country Club April 9, 1951, after which each held its business meeting. There were thirteen members present. It was voted to give $11.25 to the Panhandle Cancer Drive. Then we put left-over table prizes from our Hospital Benefit for sale to members, and collected $5.70 which sum went into our Sunshine fund. The following is an excerpt from our newspaer regarding our Hospital Benefit:

HOSPITAL BENEFIT SUCCESSFUL AFFAIR

A community supported event which benefited two of the community's most important institutions, Methodist and St. Mary hospital, was more than merely successful; not only was its financial reward satisfactory, but the "response of everyone was heart warming," said one of the committee members.

Funds of $113.50 will be given to each hospital. There were 74 tables arranged for the dessert held yesterday at the Scotts Bluff Country club, and there were donations from others who were unable to attend. Practically every town in the valley was represented.

"We did not contact a single person who was uncooperative," said Mrs. John Heinke, president of the Medical auxiliary which sponsored the event. The drug stores were mentioned as being particularly helpful.

MRS. L. J. GRIDLEY,
Publicity Chairman.

The final meeting of the Omaha-Douglas County Medical Auxiliary was a luncheon meeting held May 8, 1951 at the Hill-Top House. The following officers were elected: Mrs. Herbert F. Staubitz, President; Mrs. James J. O'Neil, President-elect; Mrs. Arnold McDermott, Vice President; Mrs. C. R. Hankins, Secretary; Mrs. George N. Johnson, Treasurer. $10.00 was voted for the library fund; $10.00 for the cancer fund; $50.00 for nurse recruitment, and $75.00 was set aside for a nurse scholarship fund. Philip H. Vogt, Douglas County Welfare Administrator, presented problems in the medical care of the low income groups, and of alcoholic, old age, and psychiatric cases.

MRS. G. KENNETH MUEHLIG.

Mrs. C. E. Abbot of Minden was the speaker for the Women's Auxiliary to the Adams County Medical Society at a meeting at the Hastings State Hospital April 4. Her topic was "Medical Legislation."

The auxiliary met following a dinner with members of the medical society. During the business meeting Mrs. Carl Guoldman, president, stressed the importance of study of medical education and of taking an active part in the civil defense program. It was reported that four auxiliary members were hostesses at the Red Cross blood center this week, with Mrs. E. C. Foote as hostess chairman, and that three members were blood donors.

Another report showed that 24 papers had been written by high school seniors in and near Hastings on the topic "Medicine's Role in Preserving the American Way of Life," and that judges would select the best to enter in the state auxiliary contest.

MRS. L. W. RORK,
Publicity Chairman.

NEBRASKA STATE DEPARTMENT OF HEALTH

MEDICAL JOURNAL NEWS NOTES

Dr. E. A. Rogers has been appointed Acting Director of the Department of Health, pending the appointment of a director to succeed Dr. Frank D. Ryder, who resigned in April.

The Midle States Public Health Association met in Chicago April 18, 19 and 20, in cooperation with the Illinois Public Health Association.

The annual "Continuation Short Course in Pedodontics" will be provided June 18 to 22 inclusive, at the University of Nebraska, College of Dentistry. This is a cooperative effort of the College of Dentistry and the State Department of Health. The class for this course is already filled.

The City of Beatrice is the first city in Nebraska to officially approve fluoridation of its municipal water supply for the partial control of dental caries. Superior has also officially approved the fluoridation of its public water supply and is taking the necessary steps to get the program in operation as soon as possible. Many other communities are giving consideration to this particular activity to reduce the incidence of dental decay.

Know Your Blue Shield Plan

The special Non-Group enrollment campaign held during April was the most successful campaign of this type yet conducted by Blue Cross-Blue Shield. More than 2,100 new applications were processed during the special offering which closed April 30. A large factor in the success of the campaign was the cooperation of physicians in publicizing it and recommending membership to their patients.

Prompt, efficient processing of Blue Shield cases is assured if the following information is furnished by the physician:

1. Patient's Age—This information is essential in case of dependents, and important for statistical purposes. (Only children from 3 months to 19 years of age are covered).

2. Agreement Number, Group Number—These two numbers are shown on the member's identification card, and are needed to verify membership.

3. Where Service Performed—This information is needed to approve the case.

4. Consultation and Symptoms—This information is particularly important when the case is under new membership.

5. Compensation Cases—Indicate whether or not accident cases are covered by Workmen's Compensation. (W.C. cases are not covered by Blue Cross-Blue Shield).

6. Obstetrical Cases — Please be sure to show date of last menstrual period.

7. Orthopedic Cases—Many reports indicate only the x-ray when fractures or dislocations were cared for. Benefits can be allowed only for those services reported.

8. X-Rays—Check box showing if case was accident or non-accident.

NEBRASKA MEDICAL SERVICE

BALANCE SHEET

Assets:		
Cash in Banks	$180,630.46	
Premiums in Process of Collection	17,963.60	
U. S. Bonds	384,950.00	
Accrued Interest on U. S. Bonds	3,201.87	
Total Assets		$586,746.43
Liabilities, Reserves and Surplus:		
Account Payable, Blue Cross	$ 13,888.89	
Accounts Payable, Monthly Invoices	138.09	
Accrued Payroll Taxes	76.30	
Claims Reported but Unpaid (Pending)	10,887.00	
Unearned Premiums	109,950.12	
Total Liabilities		$134,940.40
Reserves For:		
Unreported Claims	$121,670.19	
Maternity Care	166,302.00	
Bonuses	1,150.00	
Collection Losses	1,500.00	
Total Reserves		$290,622.19
Unassigned Surplus		$161,183.84
Total Liabilities, Reserves, Surplus		$586,746.43

ASSOCIATED HOSPITAL SERVICE
INCOME AND EXPENSE
Month Ended April 30, 1951

Income:	April 1951	4 Months to Date
Dues	$180,318.57	$710,375.75
Enrollment Fees	1,397.00	5,007.00
Total Earned Income	$181,715.57	$715,382.75
Hospital Admittance Fees	--------	25.00
Interest on U.S. Bonds	156.25	364.59
Miscellaneous Income	--------	30.00
Total Other Income	$ 156.25	$ 419.59
TOTAL INCOME	$181,871.82	$715,802.34
Expenses:		
Hospital Claims	$170,110.17	$623,610.54
Salaries:		
Executive	2,350.00	9,400.00
Supervisory	2,115.00	8,460.00
Clerical	7,946.36	32,200.45
Sales	3,625.00	14,500.00
Bonuses, Sales	300.00	1,200.00
Collection Expense	306.05	1,618.69
Travel, Agents	1,473.83	5,057.30
Professional, Medical	100.00	400.00
Auditing Expense	--------	1,160.00
IBM:		
Rental	1,751.96	5,715.47
Printing and Supplies	319.87	4,040.85
Advertising	3,292.42	7,423.92
Printing	1,445.20	5,752.12
Stationery and Office Supplies	325.08	1,271.02
Postage	1,800.32	5,752.25
Telephone and Telegraph	456.77	1,521.82
Equipment Repairs	81.40	81.40
Dues	343.00	1,457.50
Omaha Office, Rent and Light	1,330.46	5,332.99
Lincoln Office, Rent and Light	52.11	208.03
Insurance	111.85	1,349.33
Taxes and Licenses	6.00	1,210.09
Payroll Taxes	431.80	1,792.88
Life Insurance Premiums	--------	1,098.40
Conferences and Office Meetings	1,476.81	2,592.79
Depreciation, Furniture	284.00	998.07
Bonuses Paid for N.M.S.	--------	50.00
Miscellaneous Expense	237.51	785.66
TOTAL EXPENSES	$202.072.97	$746,041.57
Less Blue Shield Expense	13,888.89	51,664.90
NET EXPENSES	$188,184.08	$694,376.67
TRANSFERRED TO SURPLUS	—$ 6,312.26	$ 21,425.67

NEBRASKA MEDICAL SERVICE
CASE REPORT — APRIL, 1951

Number of ervices Rendered	4,011
Females	2,376
Males	1,635
Subscribers	1,563
Dependents	2,448

ENROLLMENT SUMMARY, APRIL, 1951

Groups enrolled during April	55
Groups cancelled during April	21
Number of active groups, May 1, 1951	3,078

	Subscribers	Dependents	Participants
Membership, April 1, 1951	63,187	87,830	151,017
Additions	1,445		
Less Terminations	1,100		
Net Gain	345		
Membership, May 1, 1951	63,532	88,309	151,841

Deaths

Dr. Clinton D. Heine, Hooper. Born in Hooper in 1886. Graduated from the University of Nebraska College of Medicine in 1913 and from Rush Medical College in 1916. Following his internship at St. Luke's Hospital in Chicago, he entered the U.S. Army Medical Corps where with the rank of captain, he served until July, 1919. He then returned to Hooper where he remained in active practice until shortly before the time of his death. During his lifetime Dr. Heine was one of the leading citizens in his community having served in many civic and fraternal projects. He was a member of the Hooper Lodge No. 72 A.F.&A.M. Dr. Hene was a member of the Tri-County Medical Society, Nebraska State Medical Association and a fellow of the American Medical Association. Died April 28 in Omaha. Surviving are his wife, a daughter and a son. Dr. Heine was the brother of Dr. Howard Heine of Fremont.

Dr. Charles E. Abbott, Minden. Born in Canada in 1877. Graduated from Western University in Ontario in 1900. Located in Minden in 1902. Dr. Abbott was to have been one of the fifty-years-in-practice physicians to be honored at the Annual Sessions of the Nebraska State Medical Association. He came to Omaha Monday, May 30, registered at the hotel and while talking to Mrs. Abbott in his hotel room, he suffered a coronary attack and died. Surviving are Mrs. Abbott and a son, Dr. Hodson of Minden.

Dr. Robert E. Marble, Omaha. Born in 1882. Graduated from Hering Medical College, Chicago, 1906, and Creighton Medical College in 1914. He was an honorary member of the Douglas County Medical Society and Nebraska State Medical Association. Died April 18, 1951. Surviving are his wife, a son and a daughter.

Dr. E. J. Mitchell, Scottsbluff. Born in 1880. Graduated from Creighton University School of Medicine in 1913. Located in Scottsbluff in 1920 and practiced there until his retirement in 1940. Died April 30, 1951. Surviving are the widow and two daughters.

Dr. George M. Hansen, Omaha. Born in Omaha in 1901. Graduated from Nebraska University School of Medicine in 1925. Practiced in Madison,

(Continued on page xxix)

The Nebraska State Medical Journal

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

Vol. 36 Norfolk, Nebraska, July, 1951 No. 7

EDITORIAL

WE SALUTE THE PEOPLE OF NEBRASKA

It is gratifying to record that our Unicameral Legislature prior to adjournment passed, and the Governor signed the increased appropriation for the University of Nebraska. This will make it possible for the Board of Regents to set aside, as they stated they would, $2,900,000 for the next two years for the Medical College. Imposing though this sum appears it represents but one-half the minimum amount recommended by the Alumni Association as essential to cover immediate needs for new building and additional personnel. However, a beginning has been made, and the people of Nebraska deserve congratulations upon their wisdom in selecting representatives who through careful and unbiased consideration recognized the plight of the Medical College and acted wisely and in accordance with feasibility in determining the various appropriations.

Legislators are not free agents who can do as they please when an issue is presented to them. Aside from the pressures exerted on them by groups or lobbyists in behalf of, or against any issue, they must constantly keep in mind the dispositions and attitudes of the people at home. In the final analysis it is the people at home therefore, who make the decisions. The legislator's function is merely to express these in the form of a vote. No legislator looking toward a future can afford to disregard this philosophy of government by representation. The corollary is self-evident; it needs no elaboration here.

The Nebraska State Medical Association the past year has made a great effort to acquaint the people throughout the Commonwealth with the importance of maintaining a high level of medical education. It has emphasized the dangers of continuing a starvation budget for the state's medical college. Many of our citizens were shocked to learn about the closed wards at the University Hospital because of an insufficiency in operating funds. Some of the legislators were surprised to hear (for the first time) about the system of our volunteer faculty on the Omaha campus. The press, the radio, and the pulpit in almost a unanimous voice gave their support for a better allotment once the needs of the medical college became known.

We have stated repeatedly that the people of Nebraska are desirous of the best in medical education. It is up to us as physicians to help them achieve this goal. Once attained it remains our duty to keep the public aware of the nature of medical education.

This Journal is proud of what part it may have played for the past two years in stirring up interest in this field. It pledges itself to continue in its efforts as long as medicine and medical education continue to progress.

READ THE MINUTES OF THE COUNCIL AND THE HOUSE OF DELEGATES

From time to time we feel it necessary to call attenion to the minutes of the meetings of the Council and the House of Delegates of the Nebraska State Medical Association. The members of the Council and of the House of Delegates spend many hours attempting to solve the numerous problems which come before them, and to determine the policies of the Association, with one objective: to constantly improve the service to the profession and to the people of Nebraska.

Our Secretary deserves much credit for his detailed recording of events at these sessions. No one who takes the time to read the transaction can escape the conviction that freedom of expression is enjoyed by every member of the policy-making body. The reference-committee system in principle adds to the democratic process in that every member of the Association has the opportunity to express himself on any issue by appearing before the committee to which a specific problem has been assigned. All reference committees have their meetings scheduled as to time and place, thus affording every one the opportunity of informally contributing his opinions on matters concerning the welfare of our Association. It is hoped as time goes on more and more of our members will develop the habit of greater participation. Much of what is scheduled to come before the House in its Annual Session can be obtained from the minutes of the Mid-winter meeting published early in the spring.

As a preface to such a desirable habit we suggest reading of the minutes of the May 1951 sessions. They appear on page 240 of this issue.

PLAN TO AID MEDICAL SCHOOLS

A unique philanthropic organization to provide financial assistance for all the nation's hard-pressed medical schools was launched recently. The undertaking has the sponsorship of industry, the medical profession, organized labor, agriculture, a group of university presidents and 12 scientific and educational foundations.

The establishment of the National Fund for Medical Education was announced at the annual meeting of the sponsoring group in New York City, Wednesday, May 16 by former President Herbert Hoover, the Honorary Chairman of the Fund and S. Sloan Colt, Fund President and President of Bankers Trust Company, New York.

At the meeting it was also announced that the American Medical Education Foundation, founded last December by the American Medical Association in Cleveland, will funnel its contributions from doctors through the National Fund organization. The National Fund plans to make these and other grants available immediately to the nation's medical schools, many of which have large deficits.

The Fund, Mr. Colt explained, has as its objective to turn over about $5,000,000 this year to the four-year medical schools and the approved two-year schools in the United States. It is hoped that in future years this figure can be raised substantially as the base of support is broadened nationally.

"This sum will not completely solve the distressing financial problem of American medical education," Mr. Colt said, "but it represents an important voluntary effort to help relieve the acute problem of the medical schools."

"What is most gratifying and significant," Mr. Colt said, "is the fact that this vital project has brought together as trustees a broadly representative group of men and women. Those who organized the Fund may have differing social viewpoints but, insofar as the Fund is concerned, we have united in an endeavor to solve a serious problem for the common good. Unless the medical schools are given financial help, and given it quickly, the standards of medicine may be permanently impaired and the nation's health affected adversely."

Mr. Colt further said, "The Fund is a fine example of practical democracy at work and, for those reasons, it seems hardly necessary for me to mention that it is a nonpartisan body, not permitted by the terms of its charter to seek to influence legislation."

Mr. Colt pointed out that a novel feature of the Fund's machinery makes it possible for every dollar in contributions to flow directly into medical education. Such an arrangement is possible because the administrative costs of the Fund have been underwritten by the following organizations: American Medical Association, The George F. Baker Trust, The Carnegie Corporation of New York, The Commonwealth Fund, Albert and Mary Lasker Foundation, Lilly Endowment, Inc., Josiah Macy Jr. Foundation, The John and Mary R. Markle Foundation, The Davella Mills Foundation, New York Foundation, Sarah Mellon Scaife Foundation and The Rockefeller Foundation.

James B. Conant, President of Harvard University, told the meeting that, "one of the Fund's most appealing features is that it has brought together men of widely differing backgrounds and personal viewpoints to concentrate their energies on a problem which, if left unattended, may well help to destroy many of America's private universities."

"The cost of educating a medical student—it is about $10,000 over the four years, on the average—is so high that expansion of facilities is difficult, if not impossible; indeed, maintaining high educational standards in the face of mounting costs poses problems of grave severity," Mr. Conant said.

Gastrointestinal Symptoms Due to Diseases of the Central Nervous System and Nerve Roots*

J. JAY KEEGAN, M.D.
Omaha, Nebraska

There are three common sources of confusion or misinterpretation of gastrointestinal symptoms due to diseases of the central nervous system. These are vomiting from intracranial pressure, metabolic disturbances from pituitary gland dysfunction and abdominal pain from nerve root irritation. While the general physician may think that neurologic disturbances are not often encountered in practice, his failure to find them may be due to lack of knowledge or awareness of their frequency. This is emphasized by the observation that many intracranial pressure syndromes are permitted to develop stupor or coma before recognized as neurological, that many neurological metabolic disturbances in children are treated too long as feeding problems, and that nerve root pain commonly is interpreted as due to infection, and operations are done on the tonsils or the appendix when neurologic signs are present.

Vomiting is a common symptom of many conditions, local, toxic, or neurologic. The commonest neurologic cause of vomiting is intracranial pressure, which may be either acute or chronic. Some may think of projectile vomiting as being characteristic of intracranial pressure, but this appears only with very acute pressure of sudden cerebrospinal fluid block, as with cerebellar tumors beneath the tentorium. Cerebral tumors above the tentorium have more space to enlarge and the pressure symptoms are not so acute, hence the vomiting is more insidious and less characteristic. The most important clue in this type of vomiting is the association of unusual or persisting headache with the vomiting. In children the complaint of headache may be absent, due either to less tendency to complain or a less rigid cranial cavity. An important clue to cerebellar tumors, which occur more frequently in children, is the location of headache in the suboccipital region, with associated projectile vomiting and ataxia. Under no circumstances should spinal puncture be done in such a syndrome, for the cerebellum is herniated into the foramen magnum over the respiratory center and respiratory failure commonly develops after spinal puncture in these cases.

Chronic subdural hematoma deserves special consideration under intracranial pressure causing gastrointestinal symptoms. This is a most deceptive pathology caused by a very mild bump on the front or back of the head, without loss of consciousness and few following symptoms. The forward or backward shift of the brain tears off a cerebral vein entering the superior longitudinal sinus and venous blood collects in the unrestricted subdural space over an entire cerebral hemisphere, with no immediate focal or pressure signs. This blood clot liquifies after a week or two and the hypertonic encysted old blood begins to absorb serum from the surrounding vascularized membrane and increases in size. Serious pressure signs do not appear until four to six weeks after the mild head injury, often forgotten. The symptoms then are very vague, some headache, vomiting, and mental dullness continuing into stupor and coma. In infants the bulging fontanel, noted in association with what seems like a feeding problem, should suggest the diagnosis. This cannot be observed in older children or adults and serious pressure symptoms usually develop before a diagnosis is made. The finding of faintly yellow spinal fluid and the old blood by exploratory trephines or needle puncture establishes the diagnosis. The condition occurs often enough in infants and older persons to be kept in mind with obscure vomiting.

The most important diagnostic sign of intracranial pressure is optic papilloedema or choked disc. With any suspicion of brain tumor, ophthalmoscopic examination should be done before spinal puncture. Many physicians today feel competent to do a spinal puncture but do not develop skill in use of the ophthalmoscope. No great skill is required to be able to see and identify the normal optic disc with the ophthalmoscope, practicing on normal individuals. If a normal disc can be seen in a brain tumor suspect, spinal puncture is reasonably safe unless there are cerebellar symptoms. If a normal optic disc cannot be seen, even with dilatation of the pupils, more expert ophthalmoscopic examination should be obtained before spinal puncture is done, to diagnose or rule out optic papilloedema.

The technique of spinal puncture merits some consideration, since so many physicians now are using it as an added diagnostic procedure, sometimes before adequate neurologic survey has been done. Use of novocaine prevents pain and fearful talk afterwards about the procedure. No larger than a twenty gauge spinal needle should be used as the incidence of post-puncture headache is directly increased by the size of the needle. This headache is due to continuing escape of cerebrospinal fluid through the hole in the dura made by the needle, increased by gravity when the patient is up. Spinal puncture without accurate manometric measurement of pressure is inexcusable, as it usually necessitates repetiton of the puncture. No special manometer is needed, only a sterile connecting tube to a blood pressure manometer with zero reading. Judgment of spinal pressure by rate of flow from the needle is about as accurate as judgment of blood pressure by feeling the pulse. Since spinal anesthesia has become so common it should be remembered that post-operative headache and vomiting may come from chemical menigeal irritation or from post-puncture fluid escape.

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*Read before the Omaha Mid-West Clinical Society, October, 1950.

Metabolic gastrointestinal symptoms commonly are related to disturbances in the region of the pituitary gland. This gland, along with the pituitary stalk and floor of the third ventricle is the most vital regulatory area of the brain, both for other glands of internal secretion and for metabolic processes as water and temperature regulation and consciousness. Posterior pituitary lobe dysfunction is of three recognized types; abnormal obesity and amennorrhoea of the chromophobe adenoma; giantism or acromegaly of the chromophil adenoma, and the peculiar hypertensive obesity of the basophil adenoma. The anterior pituitary lobe, of neural origin through the pituitary stalk to the floor of the third ventricle of the brain, is most complicated and vital in its functions, with related diabetes insipidous, sympatheticotonic reactions related to gastric ulcers, hyperthermia, and loss of consciousness. The Frohlich syndrome of the pituitary stalk craniopharyngioma is an example of disturbed function of this region. Although no one can accurately evaluate the reactions of this complicated region, it is well to remember that many vague disturbances of gastrointestinal function may have their origin there.

Nerve root pain is a very common symptom, related to pathology of the spine or spinal canal. When this pathology is in the lower thoracic spine, there is reference of radiating pain obliquely around the trunk to the abdominal wall. With this nerve root pain there is variable abdominal hyperesthesia, muscle spasm and tenderness to pressure, simulating an inflammatory process in an underlying abdominal viscus. If the nerve root involvement is inflammatory, as with herpes zoster and many less manifest virus nerve root infections, temperature and leucocytosis may be present to add to the difficulties of differential diagnosis. However there are some characteristic features of nerve root pain which should be recognized. The most important is the band-like radiating course around the trunk with some localization of pain and tenderness over a limited portion of the spine. With this band-like distribution there usually is some demonstrable segmental sensory disturbance, either hyperalgesia or hypoalgesia, which is best tested by very light pin scratch across the involved area. The presence of hypoalgesia or faint sensory loss in the recognized distribution of a nerve root is definite evidence of loss of function of that nerve root, not explainable on the basis of a sensory reflex phenomenon. The presence of a segmental band of hyperalgesia is not so certain in its indication of direct nerve root involvement, for there can be segmental cutaneous reference of pain and hyperalgesia from an involved abdominal viscus. The familiar lower angle of the scapula eighth thoracic nerve root pain from gall bladder involvement and the supraclavicular fourth cervical nerve root pain associated with irritation of the center of the diaphragm are familiar examples.

Treatment of these inflammatory lesions of nerve roots, where direct surgery is not indicated, may be novocaine injection, with some benefit, either in the hypersensitive superficial skin area, in a deeper focal area of pain and tenderness, if present, or around the nerve root in the paravertebral region if the segmental distribution is identified. Also some deep x-ray therapy may be directed over the nerve root involved during the subacute stage of inflammatory reaction, this particularly applicable to herpes zoster. If the benefit from novocaine is definite but not long lasting, surgical section of the sensory portion of the nerve root involved may be warranted.

Nerve root compression by tumors of the vertebrae or tumors within the spinal canal is a common cause of confusing abdominal pain. The clue to the correct diagnosis is the radiating band-like character of the pain extending obliquely around from a tender place in the spine. Also there is likely to be some reduction of sensation or hypoalgesia in the distribution of the compressed nerve root, best demonstrated by very light pin scratch, scratching outwards from the segmental pain zone. Or, if the tumor is large enough within the spinal canal to compress the spinal cord, there will be some beginning sensory and motor loss in the lower extremities or bladder. In such cases it may be easy to demonstrate the upper limit of this sensory loss by extending the very light pin scratch upwards from the extremities over the abdomen, when the patient will report that the pin seemingly becomes sharper at a definite oblique segmental line where normal sensation begins.

Tumors of the vertebrae compressing nerve roots commonly are metastatic from breast or prostate, the former being more common in the thoracic spine where the nerve roots supply the abdominal wall. It is a common mistake when searching for the cause of such nerve root pain located in the abdomen to take x-rays of everything there, and miss by only a few vertebrae the evident bone destructive lesion at the midthoracic level. It is well to remember that the level of the umbilicus is supplied by the tenth thoracic nerve and that this nerve root ascends two or three vertebrae higher in the spinal canal before it enters the spinal cord. Thus a nerve root pain syndrome at the level of the umbilicus requires an x-ray centering on the seventh thoracic vertebra for demonstration of causative bone pathology. The breast and prostate always should be carefully examined for primary carcinoma in such cases, as well as the abdominal organs.

Intraspinal tumors are more difficult to diagnose early than vertebral tumors causing nerve root pain, for there will be no x-ray evidence until late, when the spinal cord and lower extremities obviously are involved. It is common observation that a fair percent of these slowly developing cases have some abdominal operation performed before clear neurologic symptoms develop. More careful check of the band-like radiating character of the pain from the spine and sensory testing by light pin scratch for faint segmental sensory reduction or hypoalgesia should give the clue to correct diagnosis. It is inexcusable to persist with false ideas of focal infection as a cause after obvious paralytic signs appear, or to wait until paralysis of the lower extremities is nearly complete before neurological reference is made. A high percentage of the tumors which develop within the spinal canal are benign and completely removable, as the small olive-sized neurofibroma and meningioma. Incomplete removal of other less benign, extramedullary intraspinal tumors gives immediate relief of cord compression and prompt recovery of lower extremity and bladder paralysis, lasting a variable time, depending on the malignancy of the tumor and response to radiation therapy. The intramedullary tumors of the spinal cord seldom give rise to much nerve root pain and are not often benefitted by surgery.

Gastrointestinal Symptoms Due to Extrinsic Organic Etiology*

The Importance of History Taking

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There are few systems of the body that have as many subjective symptoms as those arising from or related to the gastrointestinal tract. Nearly all forms of disease sooner or later will produce some symptomatology in the gastrointestinal canal. Organic etiology outside the gastrointestinal tract is probably more productive of symptoms than tumors, ulcers, strangulation, infections or other pathological conditions of the gastrointestinal tract itself. The frequency of gastrointestinal complaints arising from disturbed, emotional conditions is well appreciated.

In the diagnosis of gastrointestinal disturbances a clear history is exceedingly important. Few patients with extrinsic organic disorders have significant or diagnostic physical findings. Laboratory examination, helpful in many diseases, is of secondary importance. It takes patient listening, careful questioning and considerable ingenuity of the physician to obtain a satisfactory history. The causes of disease outside the gastrointestinal tract that produce digestive symptoms are many. A careful history is important irrespective of whether the gastrointestinal symptoms arise from allergy, a cardiovascular disease, infection of the urinary tract, head injury, endocrinologic disturbance or faulty dietary habits.

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*Read before the Omaha Mid-West Clinical Society, October, 1950.

In taking a complete and comprehensive history, the physician has three responsibilities: first, to search for all causes of the underlying disorder; second, to be on the alert to uncover latent disease, and third, to understand and evaluate the patient's reaction to his physical and environmental condition.

Every effort should be made to put the patient at ease before trying to get a detailed history. Often it may mean considerable expenditure of time in seemingly unimportant or irrelevant matters. The process of letting the patient feel quite "at home" with the doctor is productive not only of a comprehensive history, but also begins to pave the way for successful therapy. Manner of listening, experience and judgment of the physician will aid in creating an atmosphere favorable to the patient so that he feels at liberty to tell the story of his illness. There are some patients in whom this understanding can be gained quickly; others require more time. No simple, direct or routine procedure will attain the desired rapport between physician and patient. It takes time, intelligent listening interspersed with pointed questions to accomplish the task. Much will be gained by quietly encouraging the patient to describe symptoms in his own words. Some physicians attempt short cuts by using stock questions or supplying words or phrases to the patient whenever there is any hesitation. A history may be elicited quickly by this method, though it may vary widely from the true course of events in the patient's life.

It is important that we become more than passive listeners. For the most part, the patient should tell his story with as few interruptions as possible. It is only when the patient looks to the physician for guidance that he should ask the significant question that will clarify a significant point. A stiff cross-examination, while an important attribute of a good defense attorney, is an ill-advised procedure as a starter in obtaining a history from a new patient. Throughout the welter and mass of information that the patient gives us, the physician must actively listen, separating the wheat from the chaff, and carefully recording the significant points.

In a series of seminars on treatment held at the University of Minnesota, it was demonstrated that physicians generally comprehend the medical situation, but that they are not trained to let the patient tell his own story in his own way. It requires patience, and still more patience to hear the story in its entirety.

Patients come to the physician with some apprehension and dread. Few ill people really like to consult a physician or a dentist. Nearly all hope that a visit to the doctor can be avoided. A certain degree of apprehension perhaps comes with the thoughts that the physician may find something seriously wrong, and some patients will tell only those symptoms that they think will not too seriously incriminate them. It will be evident in some, well concealed in others; some will do it consciously, with others it may be quite unconsciously. Much has been written about the advisability of telling your doctor everything and completely. Desirable as this may be theoretically, experience with patients indicates that few are capable of being that objective about themselves. It takes a long time and a high degree of confidence by the patient in the physician before these goals are reached. Also, the inability to recognize important symptoms may lead the patient to omit significant items.

A comprehensive history of all patients with symptoms of gastrointestinal disorders is essential in reaching an understanding of the disorder present. A printed history form with all important items of history and symptomatology has been found a necessity. Even with repeated practice in careful history taking it is found convenient to refer to the printed form so that a complete history can be obtained. Dr. Logan Clendenning in one of his last books makes the very pointed remark that the physician "should follow" his history routine slavishly; when he grows so old or confident or careless that he relaxes this observance, he begins to make mistakes." Printed history forms have the additional advantage of having the information in such form that they can be studied easily at a later time. Each complaint has its allotted space on the card, and remarks concerning a particular symptom will always appear in the same space in the history form. Anyone who has reviewed a series of cases knows the difficulty encountered in reading a hundred or more hospital charts, trying to find the significant points for a statistical review. Much time and effort is saved in using printed forms as the physician is not required to mechanically write the same symptoms or complaints for each patient, but merely add pertinent remarks concerning anorexia, vomiting, dyspnea, etc. The history should include any and all observations that have a bearing on the patient's medical condition.

There are three major obstacles that stand in the way of obtaining a complete history:

After listening to a patient's main complaints frequently physicians form a quick judgment as to the diagnosis and then attempt to get a history confirming this rapid judgment. Throughout the taking of a history, the physician must maintain an open mind, carefully eliciting symptoms in each of the various systems. Too frequently histories are written in a pointed fashion as confirming an opinion or a snap judgment. The printed history form is helpful in leading the physician to carefully explore all the systems and all of the pertinent symptoms.

Second, patients may be quite vague concerning the exact time when their symptoms began, or the sequence of events of their illness. At times the patient may not fully comprehend the meaning of normal physiology and relative bizarre accounts of past events. It is always well to encourage the patient to tell his story in his own words.

Third, frequently while the patient is attempting to gather his thoughts and describe his symptoms he quickly acquiesces and accepts the terms suggested by the physician without understanding their meaning. It is always well to interpose in the preliminary conversation or later, the remark that you would like to know what the patient thought was wrong. Often very revealing statements are made by the patient who has a fairly good insight into the disease process. Nearly all patients encouraged by such a remark give a better chronological description of events of their illness.

Some patients become quite discursive and talk at length on irrelevant matters. A few gentle suggestions, a pointed question or two often help guide the patient back to the essential points. Printed history sheets on the desk of the physician can be a useful device for calling the patient's attention back to the matter at hand. While a certain degree of talkitiveness is desirable, early in the history, in its later phase it is well to circumscribe the patient to the discussion under direct consideration. It has been found desirable to divide the history into the following categories:

PRESENT COMPLAINTS

The events that led the patient to seek medical assistance can usually be summarized in a concise sentence or two. Usually not more than a paragraph is needed to describe the pertinent symptoms. A more detailed account of the individual symptoms may be described later in the history.

PAST ILLNESSES

Past illnesses should include the significant diseases of the patient in the past that may have a bearing on the present difficulties. A history of tuberculosis, for example, should make the physician alert to the possibility of tuberculosis of the gastrointestinal tract. Persons who were in the tropics either with the armed forces or for other reasons must be closely questioned concerning the possibility of one of the tropical diseases in the past, as bacillary dysentery, malaria and schistosomiasis. A previous history of typhoid fever should call to mind the possibility of cholelithiasis, since about 10 percent of the patients with typhoid fever develop cholelithiasis. Multiple operations should arouse the suspicion of neurogenic forms of disease.

FAMILY HISTORY

A history of carcinoma in several members of the family may be quite significant. A family history of overeating is particularly important since it may predispose gall bladder disease, diabetes or heart disease. Certain families have long histories of dyspepsia. Frequently, there is an underlying, emotional maladjustment with anxiety among members of the family that influence events at the dinner table and finds somatic expression in the appearance of stomach disorders. With the increased longevity of the general population physicians must care for more elderly patients. Careful inquiry should be made concerning the digestive history, especially of the older patients. Bockus pointed out that some families have a lessened stomach acidity with a distinct gastrointestinal pattern often associated with macrocytic types of anemia.

PERSONAL HISTORY

The age of the patient may furnish some clue as to the most likely types of diseases that may be encountered. Appendicitis must always be borne in mind as an important entity among children and adolescents. Vague gastrointestinal disorders with some abdominal discomfort, occasional nausea and vomiting are really recurrent attacks of acute appendicitis. In middle aged patients, peptic ulcer, gall bladder disease and chronic hypertrophic gastritis are commonly encountered. Portal cirrhosis with its progressive symptomatology and definite physical and suggestive laboratory evidence occurs consistently within the short period of 48 to 52 years. Older patients present a very troublesome diagnostic problem. It is rare to find purely functional disorders of the gastrointestinal life after 60 years of age, especially without any earlier symptoms. Whenever a patient has long enjoyed good health and then develops vague or significant symptoms, the possibility of cancer must be borne in mind. Cancer of the esophagus usually presents

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striking symptoms whereas cancer of the stomach and rectum may develop with fewer significant symptoms over a long period of time. Cancer of the pancreas and bowel usually occurr at an earlier age than cancer of the stomach, rectum or liver. The only exception to this rule is women in the menopause where severe gastrointestinal disorders may be one phase of the menarche.

HABITS

A careful review of the eating habits of the patient are quite essential. It is important that the physician obtain a complete inventory of the patient's eating habits. It should include the time, amounts and types of food taken during the day. Statements such as "my eating is about normal," or "I eat a regular diet," are often meaningless. A surprisingly large number of patients have the most fragmentary type of breakfast. Others have self-imposed diets consisting of one or two meals daily. It must be recognized that faulty eating habits predispose to disturbances of gastrointestinal physiology that may lead to symptoms similar to those encountered in organic disorders of the alimentary tract. The physician should ascertain why there were changes in the quantities of food taken, either through self imposed diets or as a result of a diseased condition. Without a comprehensive inventory of the patient's dietary habits, nutritional inadequacies cannot be determined. Other habits include the amount of exercise, sleep, type of physical work and other features that may influence the gastrointestinal tract.

HABITS OF SOCIAL AND PERSONAL LIFE

The personality and environmental stresses of the patient are important in determining whether or not a functional gastrointestinal condition exists. It has been estimated that two-thirds to three-quarters of all patients who come to physicians with complaints referable to the gastrointestinal tract have conditions resulting from intra psychic problems, environmental stress and/or physiological disturbances of the gastrointestinal tract secondary to disease elsewhere. Only a small number of patients with gastrointestinal symptoms have organic disease of the gastrointestinal tract. Careful history of the inventory by system will reveal extrinsic organic disease. The functional pattern is best ascertained by indirection. Few patients apparently are able to correlate their home or business worries with their physical complaints. Through causal conversations and pertinent questions, the physician can often uncover the situation which is producing painful symptoms. Many patients in unpleasant environment are not fully aware of their situational neurosis and consequently, cannot honestly tell the doctor that their trouble is an overindulgent mother, a tyrannical boss, a dependent sister or an unfortunate love affair.

Serious organic disease in a dominant member of the family or in several members of the family may become a source of grave apprehension among other members of the same family. I well remember the case of a father who had been ill for nearly a year before a diagnosis of carcinoma of the stomach was made. Within two years, no less than three other members of the same family consulted me with vague gastrointestinal symptoms strikingly similar to those of the father. In no instance was carcinoma discovered and in each case the real cause of the trouble was personal emotional problems.

INVENTORY BY SYSTEM

It is imperative that the history taker include a detailed informational report of the respiratory, circulatory, urinary, metabolic, reproductive and nervous systems in addition to the digestive system. Throughout the session allow the patient to tell his story without interruption. Blank portions of the history, items not covered in detail, vague statements and seemingly inconsistencies should be tactfully, though firmly, reviewed by the physician with the patient. Dr. Isaac Abt, my Professor of Pediatrics, used to remark that the hardest thing to teach medical students was to be patient and intently listen to all the mother says. "She will tell you the whole story, even though it may include many other features not relevant, if you will patiently listen and sort out the important facts."

History taking is one of the finest arts of the practicing physician; it requires technical skill, scientific knowledge and broad human understanding. No history can be too complete. The review of the complaints should be made patiently and fairly, though at all times it should be comprehensive and complete. Rudyard Kipling summed up the objectives of history taking in the following poem:

I have six honest working men
They serve me till I die
Their names are Who and What and When
and How and Where and Why.

LILLY'S TO PROCESS BLOOD PLASMA

Because stock-piling of human blood plasma for military or civilian disaster is considered an essential defense measure, Eli Lilly and Company has announced plans to establish a modern blood-processing unit. Over 2,000,000 pints of blood were processed and supplied at cost by the Lilly company during World War II. The new unit, to be set up and operated in Indianapolis for the Armed Services Medical Procurement Agency of the United States, will be completed late this year.

Whole blood collected in principal Midwestern cities by the Red Cross will be expressed to the Lilly plant in refrigerated containers. Almost immediately after the whole blood arrives, processing starts with the centrifugation of plasma from the cells. The plasma is drawn off, pooled, and irradiated with ultraviolet light. The latter step has been added since World War II and is designed to inactivate the virus responsible for hepatitis. The plasma is then shell-frozen against the inside surface of a rotating bottle. Drying is accomplished by controlled temperature and high vacuum. Rigid aseptic technics are followed in processing, and all plasma must pass sterility tests. Plasma will be packaged in a sealed moisture-proof container with a companion bottle of sterile diluent. Sterile tubing and hypodermic needles will complete the unit, which will provide ready-to-administer plasma at the scene of injury.

Gastrointestinal Symptoms Due to Cardiovascular Disease*

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The differential diagnosis between upper abdominal disease and heart disease is sometimes quite difficult. An acute upper abdominal lesion, especially if it involves the diaphragm, can produce a pain which radiates upward substernally and out to one or even both shoulders, and have all the appearance of being true cardiac pain. A striking illustration of this was a man 44 years of age who, while in church, had a sudden severe pain in the upper abdomen which radiated up to both shoulders and about one-fourth the distance down both upper arms. He did not vomit or feel nauseated, but broke out in cold sweat. The pain temporarily eased sufficiently to allow him to get home, where he had another severe attack of pain. A physician saw him and said he had a coronary occlusion and sent him to the hospital.

Upon entrance to the hospital he had a rigid abdomen, a slight temperature and a white count of 12,600. Also after entering the hospital, he admitted having had considerable trouble with ulcers of the stomach in the past. In view of the past history of ulcers of the stomach, the definitely rigid abdomen, the evidence of free gas under the diaphragm on a flat film, the negative heart tracing and what appeared to be clinically a normal heart, he was taken to surgery where a perforated duodenal ulcer was demonstrated and successfully repaired.

When a patient is seen early with an acute upper abdominal condition, it is sometimes difficult to determine whether the acute process is above or below the diaphragm. If immediate interference is delayed, an abdominal lesion will usually manifest itself as such very soon, with more localizing and diagnostic findings.

The reverse of this situation is also encountered and is the subject of our discussion at this time: cardiovascular disease producing gastrointestinal symptoms. Gastrointestinal distress due to cardiac medication such as digitalis or aminophylline is very common, but the distress is due to the drug itself and not the cardiovascular lesion. Morphine should also be mentioned. Many individuals have an idiosyncrasy to morphine. They may develop severe nausea and vomiting and become excited to the point of delirium. The nausea and vomiting produced by the morphine may completely confuse the clinical picture, where one is attempting to rule out the possibility of an abdominal lesion. The time honored rule which says "if you are in doubt about the diagnosis, don't give morphine," applies particularly to patients with acute gastrointestinal symptoms.

Right upper abdominal pressure pain due to an engorged liver as a result of cardiac decompensation or pericardial effusion is not too uncommon. Acute infarction of the kidney, spleen and mesentery from emboli arising from valvular vegetations in acute or subacute bacterial endocarditis or intra-cardiac thrombi in acute myocardial infarction, may produce acute abdominal pain. Aneurysm of the abdominal aorta or its branches may cause abdominal pain by pressure on the spine or nerve roots.

Most common and confusing of all are the gastrointestinal symptoms due to angina pectoris or coronary occlusion.

An illustration of this was a 57-year-old man who was awakened at 3:00 o'clock in the morning with a sudden attack of pain in the upper abdomen. The pain was severe and radiated up both sides of his chest, around to the back and into the neck. He also had what he described as a great deal of "gas" in his stomach. The local physician saw him and gave him a hypo and some powders following which he vomited and the pain became less. During the day he took several laxatives and an enema to make his bowels move. At 4:30 in the afternoon the pain became severe again. He was given another hypo and sent to the hospital as a possible case of acute upper abdominal pathology.

He was very uncomfortable with pain when he entered the hospital at 8:30 in the evening. His face was flushed and the note reads "there was severe rigidity of the upper abdomen." The pulse rate was 62, the temperature 99.2, and the blood pressure was 90/70. Urine examination was normal and the white count was 25,600. He was given another hypo at midnight.

The interne heard a pericardial friction rub and ordered an electrocardiogram, which showed an active acute posterior wall myocardial infarction. The patient admitted he had had previous brief spells of chest pain, and pain in the pit of his abdomen, but never severe. X-ray of the heart and lungs suggested coronary artery disease, and a flat film of the abdomen showed generalized moderate gaseous distention of the large and small bowels, which was interpreted as being due to circulatory failure. In view of the persistent tenderness and rigidity of the upper abdomen and his tendency to be nauseated, a cholecystogram was done on the third hospital day which showed poor concentration of dye in the gall-bladder and an enlarged liver which was interpreted as being due to cholecystitis or passive congestion.

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*Read before the Omaha Mid-West Clinical Society, October, 1950.

He had a rapid pulse rate and a slight daily temperature for the first three days following admission. The white count remained around 15,000. He continued to complain of attacks of pain in his chest associated with shortness of breath and at times he became very nauseated. He developed numerous ventricular extrasystoles. His pulse gradually became weaker and he died on the 8th hospital day in acute cardiac failure.

Autopsy revealed a normal gall-bladder and gastrointestinal tract except for passive congestion. There was acute dilation of the heart with right coronary thrombosis with infarction of the posterior wall of the left ventricle and the posterior part of the interventricular septum. The left coronary artery showed coronary sclerosis.

Not all patients with acute cardiac infarction, especially posterior infarction, have a detectable pericardial friction rub, and one could speculate as to what might have happened if the interne had not heard the friction rub, and the heart tracing had not been taken. Also not all patients with acute cardiac infarction have a positive heart tracing within twelve and sometimes twenty-four hours following the acute pain. The early friction rub and the early positive heart tracing simplified the diagnosis in this patient. How would one have arrived at the correct diagnosis early if there had been no friction rub and the heart racing had been normal?

There is no specific answer to this question, as there are no other absolute differentiating clinical findings. The first important point is to have an awareness of the possibility of acute upper gastrointestinal symptoms being due to cardiovascular disease. Very often there is a clue in the history, suggesting previous cardiac difficulty, or previous upper abdominal disease. Careful attention to the exact radiation of the pain is certainly helpful, along with the proper evaluation of what we consider abdominal rigidity. And finally, where the early diagnosis is doubtful, prudent hesitancy and watchful waiting will very soon be rewarded by the preponderant clinical evidence swinging in one direction or the other.

From the moment when medicine ceased to be merely empirical, and came to be informed by physiology, pathology, and theory, the problem of diagnosis became more difficult, precisely because medicine could extend its range of action. Theory and the knowledge of causes increases the range of our action, but necessitates even more extensive and exacting information about the patient whom we treat. The physician is able to anticipate a number of other conditions which may be mistaken for heart disease, such as cardiospasm, pylorospasm, hiatus hernia, intercostal neuralgia or nerve root irritation. Also he has the equipment with which he can, at times, get a great deal of help in discovering whether the observed symptoms point to heart disease or some other abnormality. With the x-ray and electrocardiogram one can unearth information not otherwise accessible. While the differential diagnosis between gastrointestinal disease and cardiovascular disease depends primarily upon accurate clinical observations and judgment, there are times when the x-ray or the electrocardiogram gives the final solution of the problem.

Gastrointestinal Symptoms Due to Diseases of the Genito-Urinary System*

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A symptom is an important diagnostic clue but back tracking is often necessary to find the origin of the pathology involved. This is often true when gastro-intestinal symptoms are due to genito-urinary diseases, especially if genito-urinary symptoms are absent or overlooked.

INCIDENCE

In many large clinics, from 10% to 20% of the patients require a urological study. In about 20% of cases of genito-urinary pathology, the symptoms may be misleading and result in abdominal operations.

Abehouse(1) analyzed 137 cases that were operated and found these results:

58 Appendectomies	No relief in 31 cases
48 Pelvic Operations	No relief in 26 cases
9 Gall Bladder	No relief in 2 cases
2 Gastric-Colon	No relief in 2 cases
6 Explorations	No relief in 6 cases

Hess(2) in studying 80 consecutive cases of ureteral calculi, found that all but two had previous appendectomies.

Hugh Cabot stated, "The most common operation for right ureteral stone is appendectomy".

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*Read before the Omaha Mid-West Clinical Society, October, 1950.

Without doubt, in recent years, the incidence of abdominal operations for genitourinary diseases has greatly decreased. This is due to the greater use of x-ray facilities, well equipped laboratories and precision diagnostic instruments.

SYMPTOMS

Renal or ureteral calculi, hydro-nephrosis, nephroptosis, infections, anomalies, in fact, any pathology in the genito-urinary system can cause gastro-intestinal symptoms. In some cases the urinalysis may be negative and repeated tests are necessary to reveal an infection of the intermittent type. The symptoms may appear insidiously. Children with congenital anomalies such as vesical neck obstruction, may have gastro-intestinal symptoms. Adults may have chronic, obscure abdominal symptoms due to hydronephrosis, ptosis or renal infections. The pathology may result from trauma, foci of infection or from ptosis following pregnancy.

Men of advanced years may have stomach trouble, constipation, loss of appetite and weight which may be due to the pathology produced by prostatic hyperplasia. Many of these patients are treated for ulcer, "dyspepsia," or the lack of or too much "acid in the stomach." In these cases, nocturia is often accepted as a normal condition of old age.

The sudden onset of gastro-intestinal symptoms due to ureteral calculi is well known and when occurring on the right side, may simulate appendicitis. Abehouse(1) classified the symptoms into three groups:

I. Toxic

1. Uremia.

2. Infections of the kidneys, as nephritis, pyelitis, pyelonephritis and tuberculosis.

Bacterial toxins are present and the N. P. N. may be elevated.

II. Mechanical-Obstructive.

The symptoms are due to pressure of a tumor, large kidney, or to blood and pus in the perirenal space.

III. Reflex.

"Retroperitoneal syndrome".

The symptoms produced may simulate diseases of the stomach, duodenum, liver, gall bladder, appendix or colon.

Anatomy. (Rolnick(3)).

Gastro-intestinal symptoms in genito-urinary diseases are due to the close inter-relationship of the nervous systems and lymphatic communications.

The lower bowel and urinary bladder develop from the cloaca.

The nerves of the bladder origin in the autonomic nervous system and there are two pathways:

1. The Hypogastric or Sympathetic.

2. The Pelvic or Parasympathetic.

Both these pathways have fibers that pass through the hypogastric ganglia.

The upper part of the ureter receives innervation in part from the renal plexus, the middle and lower portions from the upper sacral ganglion, inferior hypogastric and vesical plexus. The renal plexus receives branches from the dorsal roots of the eleventh and twelfth spinal nerves, from the celiac axis and semilunar ganglion and from the splanchnics and vagus. There are many anastomoses between the renal plexuses and the inferior and superior mesenteric plexuses.

The nerves of the stomach, small intestine, cecum and transverse colon are derived in part from the same source as the kidney and ureter. The remainder of the gastro-intestinal tract (descending colon, sigmoid and anal sphincter) and the lower genito-urinary tract have a common nerve supply. From this intricate net work of correlated nerves, one can understand why pathology of the genito-urinary system may, by reflex stimulation, produce gastro-intestinal symptoms.

DIFFERENTIAL DIAGNOSIS

It is difficult to cite individual diseases, but some general principles may be discussed.

A complete urological study should be made in all cases of hematuria and pyuria and should be considered in patients having obscure abdominal pains and digestive symptoms. Abdominal masses pose diagnostic problems. Engel(4) suggests bimanual ballottement as in obstetrics. If positive, it indicates a retro-pertoneal tumor, if absent, it is abdominal. Hess(2) stated that "Pain with tenderness is local. Pain without tenderness is referred".

A scout K. U. B. x-ray is very valuable. Calculi may be visualized. The absence of the psoas shadow may suggest a perinephretic abscess. There may be a suspicious soft tissue shadow that would require further study. A great deal of information can be gained from excretory pyelograms, especially in cases with non-opaque calculi and in cases of anomalies of the urinary system. A displacement of the ureter may indicate a retroperitoneal tumor. If the excretory pyelograms are not conclusive, retrograde studies should be made.

Blood and pus may be present in the urine from extrarenal causes. In about 10% of cases of appendicitis, there may be red blood cells and pus cells in the urine because of the proximity of the appendix to the ureter. Recently a case was seen in which the tip of the appendix adhered to the bladder and ruptured into it. Diverticuli of the bowel may become adherent to the bladder and rupture into it. The same may occur in tuberculosis of the bowel.

A patient may have diseases of both the gastro-intestinal and genito-urinary systems, one of which may be acute. For example, a urologist may perform a prostatectomy because a patient had an acute urinary retention. The patient may develop gastric symptoms which could be due to malignancy or to an ulcer, yet these symptoms are often blamed upon medication.

If pyelograms and barium studies are to be made, the pyelograms should be done first as the dye is rapidly excreted while the emptying time of barium is delayed and make pyelograms unsatisfactory.

CONCLUSIONS

1. In cases of obscure abdominal symptoms, the possibility of genito-urinary pathology should always be kept in mind.
2. A flat K.U.B. x-ray or excretory pyleograms may reveal genito-urinary disease.
3. A single urinalysis may be negative. Pyuria and hematuria may be intermittent.
4. Patients having hematuria and pyuria or other suggestive genito-urinary pathology should have a complete urological examination.
5. Patients may have gastro-intestinal symptoms and no genito-urinary symptoms in diseases of the genito-urinary system.

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Gastrointestinal Symptoms Due to Infectious Diseases; Allergy*

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The extrinsic causes of gastrointestinal symptoms in children outnumber by far the intrinsic causes. The largest group included are the infectious diseases. The younger the child the more he is predisposed to gastrointestinal symptoms. Indeed the only symptomatic evidence of a parenteral infection may be symptoms referable to the gastrointestinal tract. To complicate the picture these symptoms may persist for weeks after the acute infection has subsided.

Someone has said that one can usually prevent the quintet of symptoms so often associated with parenteral infections by giving an all-day sucker or its equivalent. These symptoms include (1) vomiting, (2) hyperventilation, (3) fever out of proportion to the infection, (4) diarrhea and (5) convulsions. The intensity of these symptoms is greater early in life when glycogen stores are minimal. With the onset of a febrile illness anorexia decreases the food intake at a time when katabolism is accelerated. Very shortly the reservoir of liver and muscle glycogen is depleted. The stores now being depleted, the body tissues in the form of fat and protein are katabolized. Since there is inadequate carbohydrate to burn with the fat and protein, ketone bodies are produced. To compensate, vomiting is initiated to dispose of hydrochloric acid and hyperventilation to dispose of carbonic acid at the same time ketone bodies may be excreted in the urine. The vomiting and hyperventilation result in fluid loss often to the point of extreme dehydration, which may cause the temperature to climb very high, even with mild infections. This fever may cause generalized convulsions.

Parenteral diarrhea results in many instances because of the febrile suppression of hydrochloric acid and its loss through vomiting. There are two reasons for the diarrhea. Hypochlorhydria in itself is a known cause and the secondary increase in organisms in the upper gastrointestinal tract results in fermentation and diarrhea. This whole train of events can usually be prevented by supplying sugar and water early in the disease.

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*Read before the Omaha Mid-West Clinical Society, October, 1950.

Candy, pop, fruit juices or sherbet starting in teaspoonful quantities gradually increasing at the rate of about one teaspoonful every fifteen minutes may be retained. If the vomiting is so severe that these measures are unsuccesful, intravenous glucose or a subcutaneous administration of half strength lactate-Ringers solution and 2½ per cent glucose may be necessary. Another helpful measure is to use rectal sedation which permits the tolerance of larger volumes of carbohydrate fluids as the child becomes drowsy. Aspirin is usually well tolerated in carbohydrate liquids and may be given in large amounts for temperature control at frequent intervals up to one grain per pound per day. Usually less aspirin is required if large single doses are used at the temperature peaks. If the allotted aspirin has been used the temperature may be brought down quickly with a continuous enema of tepid water administered by enema can or douche bag so the flow may be kept continuous. The child is placed in a bath tub or on the wing of the kitchen sink so the exepelled water drains away. Body packs may also be effectively used.

In 1921 Dr. Joseph Brennemann(1) called our attention to another important clinical picture that is related directly to respiratory infections. The condition is sometimes called the Brennemann syndrome or mesenteric lymphadenopathy. The pain is extremely variable in intensity, in location and in duration. When asked where the pain is the child usually places his palm over the umbilicus. Early in the illness the pain may be sharp and intermittent. It often persists long after the initiating infection has subsided, sometimes weeks or months. Initially it is often the only symptom, the respiratory infection being evident only upon physical examination. The pain that persists after the respiratory infection subsides, continues to be intermittent, usually poorly localized and less sharp. During the acute phase the pain may be most intense in the right lower quadrant when it may be indistinguishable from an acute appendicitis. Indeed acute appendicitis may arise secondary to the involvement of the glands at the base of the appendix. The resulting obstruction and perhaps direct extension leads to the appendiceal involvement. The cause of the pain is related to a retroperitoneal and mesenteric lymphadenopathy. The pathogenesis of the glandular involvement is a matter of conjecture. Two routes of infection seem possible; direct invasion from the intestinal tract of the swallowed infecting respiratory organisms and the blood stream. The latter seems unlikely as the involvement is rarely generalized. Direct invasion is a more likely possibility. It would explain the localized inflammatory reaction that has been demonstrated on the bowel mucosa. The organisms can readily pass through the normal hydrochloric acid barrier due to the hypochlorhydria which has been previously discussed.

Allergy may be the background for the two previously described syndromes. Not infrequently ketosis results from a severe asthmatic attack. In this situation the hyperventilation, use of adrenalin and increased katabolism with inadequate carbohydrate intake may set the stage for the same sequence of events as a ketosis resulting from infection. In hay fever with its frequently associated subacute or chronic secondary infection one commonly observes the clinical picture of a messenteric lymphadenopathy.

Abdominal pain due to specific food allergins is seen from early infancy. The pain may be associated with pyloric waves but rarely with vomiting because of the associated cardiospasm. The discomfort may vary in intensity and may occur within a few minutes after feedings or may be delayed for several hours. The condition must be differentiated from pylorospasm and from colic due to error in feeding technique, a more common cause of distress in infancy. The history of allergy in the family is one of the most important points suggesting the possibility of a food allergin being the cause of pain. The family history of every newborn should be reviewed in detail for allergy. In every instance of a positive family history additional foods should be added slowly and singly. The routine use of evaporated milk in preference to whole cow's milk reduces the incidence of clinical allergy. Synthetic vitamin C and D in place of fish oils and orange juice may be used prophylactically in strongly positive bilateral family histories. The exclusive early use of thoroughly cooked pureed and dehydrated foods may be helpful in preventing clinical allergy. In the infant who develops eczema or gastrointestinal symptoms due to food allergins the technique of withholding all food except evaporated milk, adding a single new food per week, helps to determine the specific offending foods. Their avoidance for several months may result in loss of sensitivity. If the infant continues to have allergic symptoms on milk and vitamin C and D then a milk substitute should be used. At an early age when diets are simple it is usually relatively easy to discover and to remove the offending allergins and relieve the resulting gastro-intestinal symptoms.

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Mesantoin in Difficult Cases of Epilepsy*

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Because of several cases of toxicity at this hospital, reports of toxicity in the literature, and a reluctance on the part of several members of our staff to use mesantoin, it was felt that a controlled study on the use of mesantoin† in epilepsy was indicated. It was further decided to use this drug on cases that were refractory to or had an intolerance for other medication.

TOXICITY

The two cases of toxicity at this hospital previously mentioned were one case of severe exfoliative dermatitis in 1947, and a case of aplastic anemia in 1949. Both patients recovered.

There are many reports of toxicity in current literature, which include leukopenia, aplastic anemia, pancytopenia, dermatitis medicamentosa, drowsiness, lymphadenopathy, and fever. The most serious of the toxic reactions seems to be pancytopenia and aplastic anemia‡ with several reported deaths.

Analyzing these reports it is noted that when the drug was quickly withdrawn with the appearance of any toxic symptoms, the majority of the patients recovered. Several of the cases also had been treated with other drugs which have been depressing to the bone marrow, such as tridione (Abbott), sulfa, and recently thiantoin (Lilly).

From these reports it would necessarily be concluded that mesantoin is a toxic drug and the patient must be under strict surveillance during therapy.

CHEMISTRY AND PHARMACOLOGY

Mesantoin chemically is 3-methyl-5phenyl-5-ethyl-hydantoin. Bercel and Ziskind(6) report a new technique of comparing efficacies of anti-convulsants. When these anti-convulsants were compared as to the largest dose not producing distortion of a normal electro-encephalogram, they were ranked in the following descending order: phenobarbital, dilantin (Park and Davis), mesantoin, and tridione.

Others(9) have found dilantin superior to mesantoin in milligrams per kilogram in preventing electroshock convulsion and also in super-maximal shock. In another study(20) comparing dilantin, mesantoin, and a new drug, thiantoin, mesantoin was superior in maximal electroshock to both thiantoin and dilantin and also in decreasing minimal electroshock. With chemoshock, namely metrazol, mesantoin was effective in preventing seizures, but dilantin and thiantoin were not. Swinyard and Goodman(33) found the ratio of the toxic dose to the protective dose to be 12 for mesantoin and 2 for dilantin. The percentage change in normal electroshock threshold was found to be plus 27 for mesantoin and plus 2 for dilantin.

Electro-encephalographic changes have been found to be minimal. There has been no correlation between length of time of drug administration and changes in the EEG. However, with patients under medication on mesantoin, 58% showed a decrease in alpha rhythm, 38% showed less slow waves, 62% showed an increase in fast activity, and 11.5% evidenced no change. As to dosage, it was found that there was a decrease in the alpha when over 0.4 grams of mesantoin had been given. It was postulated by this group (26) that mesantoin may obscure underlying EEG abnormalities and increase abnormal changes.

CLINICAL REPORTS

Clein(10) reported, of a total of 10 cases, excellent results in 6, good in 3, and fair in 1 with mesantoin, Loscalzo(27), in treating 23 patients with mesantoin and phenobarbital, found in 23 patients a 60% improvement in seizures. There was a marked reduction in 12 of his cases.

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*Presented at the Regional Research Meeting of the American Psychiatric Association, Denver, Colorado, March 2, 1951.

†Medication courtesy Sandoz Chemical Works, Inc.

‡See references 1, 4, 7, 8, 12, 13, 18, 19, 21, 32, 34, and 35.

Kozol(24) in treating 104 cases found 60% of the patients decreased their number of seizures. Ninety-six of his patients had previously received treatment. Lennox(25) reports on 35 patients, with 11% free of seizures, 17% much improved, 8% somewhat improved, and 50% unchanged. He found somnolence a prominent feature in this form of therapy.

In presenting a larger group Kozol(22) felt that the toxicity of mesantoin was almost negligible and that the dosage was limited by drowsiness. He felt that the combination of mesantoin and dilantin was very good and that the two exerted a synergistic effect. Other authors(14, 17) were favorably impressed by mesantoin. Loscalzo(28) reported an interim study, including a total of 67 patients treated with a combination of mesantoin and phenobarbital over a 4-year period, with a seizure reduction of 60%.

Numerous other articles have since appeared in the literature. Aird(2) treated 75 cases with 1 fatality; and 80% of grand mal, 78% of Jacksonian, 79% of psychomotor, and 16% petit mal improved.

Arieff(3) reported that with 34 patients 10 were in complete remission. Bercel, et al(5) in a recent report of 80 cases over a 2-year period found every type of seizure reduced, with control in 5 cases with Jacksonian epilepsy, 70% reduction in grand mal, 65% reduction in petit mal, and 62% reduction in psychomotor seizures. These authors present a fairly high toxic effect. A consensus of the other papers* reveal mensantoin to be good in grand mal and Jacksonian epilepsy with mild to serious toxic effects. Dexedrine is used by many of these authors to combat the somnolence produced by mesantoin.

Kozol(23) in a 4-year study of 200 patients believes mesantoin to be the most effective anti-convulsant at the present time. He has found an average improvement of 90%. Twelve and one-half per cent of patients were not helped. Close to 90% of his patients had had previous medication. He has found it most effective in grand mal. He has given as high as 18 tablets daily. He has had no deaths, but has had some rashes and has found that he could desensitize patients by starting out with a low dosage, increasing it slowly.

METHOD

The patients in this study are out-patients of the Epilepsy Dispensary of the University of Nebraska Hospital. This dispensary is a subdivision of the Neurological Dispensary and deals only with epileptic cases. All of them have been cleared by Neurology, Pediatrics, or Medical Dispensaries or are referred after a hospital work-up. All cases have had careful histories, neurological examinations, skull x-rays, electro-encephalograms, lumbar punctures when indicated, and psychometric studies.

There were 19 patients. Seventeen had previously been toxic and/or refractory to other medications. Eleven cases were diagnosed grand mal epilepsy, idiopathic. Two had Jacksonian seizures. One had grand mal following encephalitis, 1 had psychomotor epilepsy, 3 had a combination of grand mal and petit mal, and 1 had a functional type of seizure, most likely psychomotor. Of the 19 cases, 9 were male adults, 4 female adults. There were 4 male children and 2 female children.

Five cases were not continued on mesantoin. Four were discontinued because of toxic effects. One discontinued the drug because of unavailability. The following are case histories of the patients that developed toxic conditions on mesantoin.

Case No. 1: D., 12-year-old female. The patient had been on dilantin gr. ½ t.i.d. She has cerebral spastic disease. The patient developed grand mal seizures as an infant with more seizures in her fourth year, having an average of about 1 to 2 seizures per month. On dilantin the patient developed marked gum hypertrophy which required surgical removal. The EEG was normal. On November 16, 1949, the patient was put on gr. ¾ mesantoin b.i.d. in addition to the dilantin. Twelve days later she returned, complaining of a skin rash. She had previously discontinued the mesantoin.

Case No. 2: J.K., 49-year-old, married, white male. He had had psychomotor seizures since the age of 24. His EEG showed an abnormal record, most likely psychomotor in type. He was put on mesantoin in October 1950, 0.1 gram daily for one week, increasing by 1 tablet each week until taking 3. On November 21 the patient returned to the clinic, having fewer seizures than ever before, but still having some. His medication was at this time increased to 4 tablets daily and on November 25 he developed a rash. Without consulting a doctor he continued medication but decreased it to 3 times daily until he entered the hospital January 12, 1951, with an exfoliative dermatitis. On withdrawal of the drug, the skin condition improved somewhat. Cortisone relieved the dermatitis and the patient was discharged on other medication. There was never any evidence of a blood dyscrasia in this case.

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*See references 11, 15, 16, 23, 29, 30, and 31.

Case No. 3: S.T., female, age 7. The patient had grand mal and petit mal epilepsy confirmed by EEG. The patient was placed on 2 gr. thiantoin 3 times daily and developed a skin rash, while having about 4 seizures of grand mal daily. On October 17 the patient was changed to mesantoin, .025 grams daily for one week, .05 the next week, and .075 the third. January 17 the patient was seen again. She had had only 3 seizures but had developed another skin rash and showed a red blood count of 3.5 million. Mesantoin was discontinued at this point.

Case No. 4: A.D., 40-year-old, white, married male. He had Jacksonian seizures secondary to scar tissue from a brain abscess 7 years previously, which was actinomycotic and metastatic from the lung. The patient has typical spastic hemiparesis on the left. His seizures were uncontrolled by dilantin and he was in the hospital because of status epilepticus. He was receiving 0.7 grams daily of dilantin, phenobarbital 0.45 grams daily. The addition of 1 tablet of mesantoin made the patient feel "woozy." He preferred that the mesantoin not be given. It is questionable in this case as to the nature or the actual presence of toxicity from mesantoin.

The remaining 14 cases who have been continued on mesantoin have all been helped. Five have been seizure-free on repeated visits to the clinic. The following are case reports of the patients on mesantoin alone and in combination with other drugs.

V.B., single, white male, age 34, previously on medication from a mail order house. The patient suffered from grand mal seizures confirmed by EEG. The daily dosage was 0.5 grams mesantoin and 0.5 grams phenobarbital. The patient is an alcoholic and cooperates poorly but is now better controlled than ever before.

G.C., 40-year-old, white, single male. His I.Q. was 50 and he showed a normal EEG. He was a difficult clinical problem. The dosage administered was 0.5 grams mesantoin, 0.3 grams phenobarbital, for grand mal epilepsy. This patient was most uncooperative but is now more comfortable and happier on the mesantoin than on previous medication. He had previously shown ataxia and gum hypertrophy on dilantin.

D.F., 2-year-old, white infant. This patient has Jacksonian seizures not benefited but worsened by dilantin. A daily dosage of .03 grams of mesantoin and .03 grams dilantin was given and the patient has been much improved.

D.H., 8-year-old, white boy. This patient has had grand mal seizures following encephalitis. The electro-encephalogram showed very fast and slow waves and was considered abnormal. He has been seizure-free on a dosage of 0.1 grams mesantoin and .03 grams phenobarbital. He had not been on previous medication.

G.M., 43-year-old, married white woman with grand mal seizures. The dosage was 0.3 grams mesantoin and 0.3 grams dilantin daily. This patient had previously developed toxicity on dilantin alone with gum hypertrophy and ataxia. Seizures are now controlled. The patient developed a leukopenia of 4,000 in June 1950 but it had spontaneously returned to 7,000 in February 1951 without change in medication.

R.N., 3-year-old, white boy. Grand mal and petit mal epilepsy was confirmed by EEG. The patient is on 0.1 gram mesantoin, 0.1 gram dilantin, and .06 grams phenobarbital. The patient developed a rash and drowsiness on 0.1 gram dilantin and the same amount of phenobarbital. With the addition of mesantoin, the seizures have been reduced to one-sixth of their previous number and there has been a decrease in the number of petit mal attacks.

I.O., 41-year-old white, single female. This patient has a functional type of seizure, most likely psychomotor, not confirmed by EEG. She is taking 0.2 grams of mesantoin and 0.4 grams of dilantin. She has a 10-year history of seizures. She had previously had 10 to 20 seizures daily but is now having 3 to 4 daily.

D.S., 29-year-old, white, married male. He has grand mal epilepsy and his EEG is suggestive of epilepsy. He is taking 0.3 grams mesantoin and 0.3 grams dilantin and 5 milligrams of benzedrine, b.i.d. The patient is having fewer seizures on the present medication than on dilantin alone, on which he had gum hypertrophy and taxia.

J.R., 25-year-old, single male. This patient's I.Q. is below 70 and his EEG is compatible with grand mal epilepsy. He is on 0.8 grams mesantoin, 1.5 grams tridione, and 0.12 grams phenobarbital and has both grand mal and petit mal epilepsy. He still has about 2 to 3 petit mal seizures daily but has had no grand mal. The patient had previously had drowsiness and gum hypertrophy on dilantin.

E.B., 18-year-old boy. His EEG showed paroxysmal bursts typical of grand mal epilepsy. He developed gum hypertrophy and drowsiness on dilantin and had been having one to two seizures monthly. He is now on 0.3 grams mesantoin daily and is seizure-free.

C.B., 10-year-old, colored boy. EEG shows paroxysmal cerebral dysrhythmia. Previously had gum hypertrophy with dilantin and is now seizure-free on 0.2 grams of mesantoin.

C.D., 33-year-old married female. EEG showed fast abnormal pattern suggestive of grand mal. On 0.5 grams mesantoin she has had no grand mal seizures. She had previously been toxic on dilantin.

L.H., 16-year-old white boy. EEG moderately abnormal. He had 0.4 grams mesantoin daily and has had no seizures. This patient has cerebral spasticity with grand mal and petit mal epilepsy. His seizures were uncontrolled and he was toxic on dilantin.

N.C., 23-year-old, married Indian girl. She has been uncooperative for the most part. The patient was toxic, somnolent, on dilantin with poor control. She has been seizure-free when taking mesantoin but frequently does not take her medication.

SUMMARY

A total of 19 patients were treated with mesantoin, 17 of whom were toxic or whose symptoms were refractory to other drugs. One patient developed an exfoliative dermatitis, 2 patients developed a skin rash, 1 patient discontinued the medicine because of "wooziness," 1 patient stopped the medication because of unavailability of the drug.

Of the remaining 14 patients, 4 are seizure-free on mesantoin alone; 2 others on a combination of drugs are much improved, one of these being free of grand mal but not of petit mal; and 3 other cases are improved.

CONCLUSIONS

1. Mesantoin is an excellent drug to use in epilepsy, but has toxic effects. In our series of cases, patients previously toxic to other drugs or unaided by them have responded remarkably.

2. When using this drug, the following precautions should be taken:

(a) Blood counts monthly.

(b) Observation for skin rash.

(c) Patients should be warned to report if untoward effects are noted.

3. The combination of mesantoin with tridione is to be avoided and with thiantoin is probably to be avoided.

4. Mesantoin combined with dilantin and phenobarbital has proven effective in cases resistant to other medication.

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Dr. F. J. Pinkerton, President of the Pan-Pacific Surgical Association, reports that plans are well under way for the Association's Fifth Congress and advises doctors to make arrangements as soon as possible to attend this meeting.

Dates for the Honolulu congress are November 7-19, 1951. The scientific program, which will begin on November 12th and continue through November 16th, will include sessions in all divisions of surgery, with papers presented by topflight surgeons from the Pacific area countries. In addition to attending an outstanding surgical conference, doctors may enjoy a delightful vacation in Hawaii and are urged to bring their families with them, with the assurance of luxurious accommodations.

The Pan-Pacific Surgical Association has been officially appointed as travel agent for those attending the congress, and it is therefore important that all hotel and travel reservations be made through the Association office, Suite 7, Young Hotel Building, Honolulu, Hawaii.

The Nebraska State Medical Journal

Sharp Building, Lincoln, Nebraska
Federal Securities Building, Lincoln, Nebraska

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111 South 39th Street
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1315 Sharp Building, Tel. 2-7585

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Subscription $2.50 Per Year. Single Copies 35c Each

The Publication Board does not assume responsibility for opinions expressed in original articles published in this Journal.

Manuscripts should be typewritten, double-spaced, and the original, not the carbon, submitted.

Reprints should be ordered from the printer, The Huse Publishing Co., Norfolk, Nebraska.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

Vol. 36 July No. 7

THE A.M.A. TWELVE POINT PROGRAM

1. Creation of a Federal Department of Health of Cabinet status with a Secretary who is a Doctor of Medicine.
2. Promotion of medical research through a National Science Foundation with grants to private institutions which have facilities and personnel sufficient to carry on qualified research.
3. Further development and wider coverage by voluntary hospital and medical care plans to meet the costs of illness, with extension as rapidly as possible into rural areas.
4. Establishment in each state of a medical care authority to receive and administer funds with proper representation of medical and consumer interest.
5. Encouragement of prompt development of diagnostic facilities, health centers and hospital services, locally originated, for rural and other areas.
6. Establishment of local public health units and services.
7. The development of a program of mental hygiene with aid to mental hygiene clinics in suitable areas.
8. Health education programs administered through suitable state and local health and medical agencies to inform the people of the available facilities and of their own responsibilities in health care.
9. Provision of facilities for care and rehabilitation of the aged and those with chronic disease and various other groups not covered by existing proposals.
10. Integration of veterans' medical care and hospital facilities with other medical care and hospital programs and with the maintenance of high standards of medical care.
11. Greater emphasis on the program of industrial medicine.
12. Adequate support with funds free from political control, domination and regulation of the medical, dental and nursing schools and other institutions necessary for the training of specialized personnel required in the provision and distribution of medical care.

Organization Section

PHYSICIAN OPINIONS

At the direction of the Public Relations Committee, a member of your headquarters staff visited with some 675 physicians from April 1950 to April 1951. The purpose of these personal visits was to determine what the membership is thinking about the various functions of the state association and the American Medical Association.

Following is a review of the attitudes of Nebraska doctors on the subjects listed. The figure at the end of each question indicates the number of members interviewed. The total number of doctors visited is broken down in this manner: 497 out-state; 96 in Omaha and 60 in Lincoln. This total represents about 60 per cent of the active practitioner members of the Nebraska State Medical Association.

Are you in favor of the $25 annual dues to the A.M.A.? (673)

Yes	606—90.0%
No	48— 7.2%
Others	19— 2.8%

What do you think of your state association dues? (673)

OK	609—90.5%
Too high	43— 6.4%
Others	21— 3.1%

Are you satisfied with the A.M.A. National Education Campaign? (673)

Yes	576—85.6%
No	57— 8.4%
Undecided	22— 3.3%
Others	18— 2.7%

What do you think of the Bulletins? (673)

Good	623—92.6%
Others	50— 7.4%

What do you think of The Journal? (619)

Good	514—83.3%
Fair	40— 6.4%
Seldom or never read	34— 5.5%
Others	31— 5.1%

What do you think of the Organization Section? (673)

Good	451—67.0%
Seldom read	139—20.6%
Never read	78—11.6%
Others	5— .8%

Are you satisfied with the programs and activities of the state association? (673)

Yes	626—93.0%
No	22— 3.3%
Others	25— 3.7%

Would you be willing to pay higher dues to the state association if further expansion became necessary? (581)

Yes	375—64.5%
Undecided	123—21.2%
No	71—12.2%
Others	12— 2.1%

DOCTORS AND HEALTH

What part do physicians play in the health of their communities? Members of the Rural Medical Service Committee were told recently that in the final analysis, doctors actually have very little control over the health of the people in their towns.

This was the opinion of Mr. Aubrey Gates, Field Director of the American Medical Association's Committee on Rural Health. Mr. Gates has for 20 years been associated with extension work in rural areas. Until July 1 he was on loan from the University of Arkansas to the A.M.A. He has now returned to his post on the faculty of the University.

Mr. Gates told the committee that health is the responsibility of the individual or the community more than it is the doctor's. To illustrate, he said that malaria had always been one of the major health problems in the south. Any doctor could recognize and treat malaria, but he could not himself prevent it. Its prevention must be undertaken by each citizen or whole communities.

Now that this responsibility has been assumed by the people, Mr. Gates related that malaria has declined to the point that many southern doctors have told him they have not seen a new case in four or five years. "Doctors could cure malaria, but they couldn't tack on screens or spray camp areas. They had to be done by each community," Mr. Gates reasoned.

The same is true of pellagra. It had long been a serious problem in the south, but now that the communities are carrying on the proper type of educational programs, pellegra has decreased to such an extent that the medical schools do not have enough cases for teaching purposes.

Mr. Gates told another interesting story that further substantiates his viewpoint. He recently attended a meeting at which the medical profession of a certain locale was being bitterly reproached for the death of two chilren from diphtheria. The criticism ended when Mr. Gates asked one question: "Did the parents of these children exercise their responsibility by having them immunized against diphtheria?" It was shown that neither had been protected in any way against the disease. From this, he was able to show those at the meetings that the blame for these unfortunate deaths should be assayed elsewhere—not to the doctors of the town.

In brief, Mr. Gates contended that too often people confuse their medical care and public health. He asserted that medical care is a purchaseable service from an expert. Health of the people is a condition governed by the actions of communities themselves. These ideas are well worth remembering.

The Woman's Auxiliary

As the new Press and Publicity Chairman of the Woman's Auxiliary, I take this opportunity to greet you, and hope that I may hear from every active auxiliary in the state in the coming fall. Plans are being made to establish a state bulletin of some kind, and if any member has any suggestions please communicate with me. I will need lots of help.

MRS. O. V. CALHOUN,
2510 South 24th St., Lincoln.

The Woman's Auxiliary to the Adams County Medical Society held its last meeting of the season recently at the state hospital, after dinner with members of the medical group.

Mrs. Carl Gouldman presided, and presented a copy of her report to the state Auxiliary meeting in Omaha early this month. Mrs. O. A. Kostal, a delegate to the convention, reported on the business transacted and noted that there are 15 auxiliaries in Nebraska with a membership of 490. Gratification of the Hastings Auxiliary in the selection of Barbara Jones and Delores Randolph of Hastings as first and second place winners in the state Auxiliary essay contest was expressed. Members were reminded of the school bond election on May 22.

Mention was made of the program presented for student nurses of the Mary Lanning Memorial Hospital under sponsorship of the Auxiliary, with Mrs. E. C. Foote in charge. Mrs. Wendall Bohling reviewed "It Was Not What I Expected" by Val Teal for the student group.

MRS. L. W. RORK,
Publicity Chairman.

BOOK RECEIVED

Anatomy in Surgery by Philip Thorek, M.D., F.A.C.S., F.I.C.S. Assistant Clinical Profesor of Surgery (Formerly Assigned to Gross and Topographic Anatomy), University of Illinois College of Medicine; Diplomate of the American Board of Surgery; Associate Professor of Topographic Anatomy and Clinical Surgery, Cook County Graduate School of Medicine; Member of American Association of Anatomists; Fellow, American College of Chest Physicians; Co-Surgeon in Chief of American Hospital Associate Attending Surgeon of the Cook County Hospital; Senior Attending Surgeon of the Alexian Brothers' Hospital. 970 pages, including index; 720 illustrations, 211 in color, drawn by Carl T. Linden, Instructor of Medical Illustration, University of Illinois College of Medicine, Chicago. Price $22.50 — J. B. Lippincott Co., Philadelphia, Pa.

MINUTES OF MEETINGS OF BOARD OF COUNCILORS

May 1, 1951

The first meeting of the Board of Councilors was called to order by Dr. Earl Leininger at 5 o'clock in Parlor C at the Paxton Hotel, Omaha, Nebraska.

The following members were present: Drs. James F. Kelley, Clayton Andrews, J. C. Waddell, W. E. Wright, R. T. Van Metre, Robert Harry, A. A. Ashby, R. R. Brady, Wm. M. McGrath, Earl F. Leininger, F. M. Bell and Frank Herhahn.

Also present were Drs. Chas. Sheets, R. B. Adams and Fay Smith.

The minutes of the February meeting of the Council were approved as published.

Dr. Leininger stated the first order of business would be the election of a Secretary-Treasurer and called for nominations for this office.

Dr. R. B. Adams was nominated to succeed himself. A motion was made by Dr. Clayton Andrews that the nominations be closed and Dr. Adams declared the duly elected Secretary-Treasurer of the Nebraska State Medical Association. The motion was seconded by Dr. Wm. Wright and unanimously carried.

Nominations were called for a member on the Board of Trustees. As it was the term of Dr. D. B. Steenburg that expired, it was the opinion of the group that more time was necessary to clarify whether or not Dr. Steenburg was eligible for reappointment.

A motion was made and seconded that this matter be tabled until tomorrow's session. The motion carried.

There were two members of the Medicolegal Advice Committee to be elected—one for the term of Dr. R. W. Fouts to fill the vacancy caused by his death; and the expiration of the term of Dr. J. P. Gilligan. It was again the concensus of the Council that more time should be taken to select the men to fill these places.

A motion was made by Dr. Andrews and seconded by Dr. Wright to hold the election of these two members of the Medicolegal Advice Committee until the next session of the Council. The motion carried.

The election of a member of the Council on Professional Ethics was the next order of business and a motion was made by Dr. James Kelly that Dr. C. F. Heider of North Platte be reelected. The motion was seconded by Dr. Andrews and carried.

The matter of Honorary Memberships was again discussed. Dr. Olga Stastny's name was presented by the Omaha-Douglas County Medical Society in a letter signed by Dr. W. A. Muehlig, Secretary, under date of April 23, 1951, for Honorary Membership. It was reported that the name of Dr. R. E. Marble, formerly presented by the Omaha-Douglas County Medical Society, could be dropped from the list of pending Honorary Memberships because of the death of Dr. Marble on April 18, 1951.

A motion was made by Dr. A. A. Ashby that the Council withhold any further recommendation on honorary memberships until after the action of the House of Delegates on the recommendations presented to them. The motion was seconded by Dr. Andrews and carried.

Dr. James Kelly presented the matter of the tuberculosis association changing their name to the Nebraska Tuberculosis and Health Association and explained the dangers and implications which might arise should this change be made on a county level, then state, and lastly national level.

A motion was made by Dr. Wm. Wright that Dr. Kelly go before the House of Delegates with this matter and suggest their opposition to this proposed change in name. The motion was seconded by Dr. R. E. Harry and carried.

The Council adjourned until the following mornnig immediately after the session of the House of Delegates.

BOARD OF COUNCILORS

May 2, 1951

The Board of Councilors held its second session in Parlor F, Hotel Paxton, Omaha. The meeting was called to order by Dr. Earl Leininger at 9 o'clock.

The following members were present: Drs. James Kelly, J. C. Waddell, W. E. Wright, R. T. Van Metre, Robert Harry, A. A. Ashby, R. R. Brady, Wm. M. McGrath, Earl F. Leininger, F. M. Bell and Frank Herhahn.

Also present were Drs. J. D. Brady, R. B. Adams, Charles Sheets and J. D. McCarthy.

The minutes of the first meeting were read and approved.

The election of the members of the Medicolegal Advice Committee was the first order of business. Nominations were called for and Dr. J. P. Gilligan was nominated to succeed himself.

A motion was made by Dr. W. E. Wright that the nominations be closed and Dr. Gilligan be reelected as a member of the Medicolegal Advice Committee. The motion was seconded by Dr. Ashby and carried.

It was the opinion of the Council that the vacancy created by the death of Dr. F. W. Fouts on the Medicolegal Advice Committee not be filled until after further counsel could be secured.

Nominations were called for a member to be elected on the Board of Trustees. Drs. Warren Thompson and Fay Smith were nominated.

A vote was taken and counted and Dr. Warren Thompson was declared the duly elected member of the Board of Trustees.

A member was sent to contact Dr. Thompson and returned with the report that Dr. Thompson refused the appointment as a member of the Board of Trustees.

A motion was then made by Dr. Wm. Wright that the Council elect Dr. Fay Smith as a member of the Board of Trustees. The motion was seconded by Dr. Ashby. General discussion followed. The question was called for and the motion lost.

A motion was made that we hold the election of the member of the Board of Trustees over until the next session. The motion was seconded and carried.

Honorary memberships were discussed and the list—as deferred from the Council meeting of May 3, 1950, and February 25, 1951—was again reviewed. It was found that four members on this list; namely, Drs. O. E. Longacre, Rising City; H. W. Orr, Lincoln; Olga Stastny, Omaha; and B. M. Riley, Omaha, were the four eligible for honorary memberships.

A motion was made that honorary memberships for these four doctors be recommended to the House of Delegates. The motion was seconded and carried.

The Council adjourned until the following morning, to meet immediately following the House of Delegates session.

BOARD OF COUNCILORS

May 3, 1951

The final session of the Board of Councilors was held in Parlor F, Hotel Paxton, Omaha, Nebraska, immediately following adjournment of the House of Delegates. The meeting was called to order by Dr. Earl Leininger, Chairman.

The following members were present: Drs. James F. Kelly, W. E. Wright, A. A. Ashby, R. R. Brady, Wm. M. McGrath, Earl F. Leininger, F. M. Bell, Frank Herhahn, W. C. Kenner.

Also present were Drs. H. M. Jahr and R. B. Adams.

The minutes of the second session were read and approved.

Nominations were called for by the chair for the member of the Board of Trustees. Drs. Fay Smith and Paul Read were nominated.

A motion was made by Dr. Wm. McGrath, seconded by Dr. Frank Herhahn, that the nominations be closed. The motion carried.

A ballot was taken and Dr. Fay Smith was declared elected as a member of the Board of Trustees.

There being no further business, the Council adjourned.

MINUTES OF SESSIONS OF HOUSE OF DELEGATES

April 30, 1951

The first meeting of the House of Delegates was held in Parlor C, Paxton Hotel, Omaha, Nebraska. Thirty-six members were present.

Meeting was called to order by Dr. J. D. Bradley, Speaker of the House of Delegates, at 2 p.m.

The report of the Credentials Committee was read by Dr. R. B. Adams, Secretary-Treasurer, and was as follows:

April 30, 1951

To: House of Delegates:

> The Credentials Committee met and examined the credentials as sent in by the county societies and recommends to the House of Delegates that the list made from the credentials be accepted as the official roll call of the House of Delegates.
>
> LOUIS E. MOON

A motion was made that the report be accepted as read. The motion was seconded and carried.

The minutes of the last session were called for by the chair and Dr. Adams stated that in view of the fact they had been published it would facilitate matters if a motion were made to dispense with the reading.

A motion was made that the reading of the minutes be dispensed with and that they be approved as published. The motion was seconded and carried.

The chair recognized Dr. J. D. McCarthy who asked for permission of the floor.

Dr. McCarthy stated that inasmuch as we had lost one of our most loyal, and probably one of the oldest members, it would seem fitting that a resolution be presented to the House of Delegates in memory of Dr. Roy W. Fouts, and that he would like to present the following resolution:

RESOLUTION

WHEREAS, one of the most loyal leaders of the Nebraska State Medical Association has passed on, and

WHEREAS, he had been a member in one capacity or another of this body, the House of Delegates, for a period of 30 years and contributed much to the successful conclusions of every session,

THEREFORE BE IT RESOLVED that the House of Delegates of the Nebraska State Medical Association recognize that in the death of Dr. Roy W. Fouts, it has been deprived of the constructive counsel of one of its most outstanding members and mourn his loss, and

BE IT FURTHER RESOLVED that this resolution be spread on the minutes of the House of Delegates and a copy, with our sincere sympathy, be forwarded to his family.

The chair asked the House of Delegates to stand in silence for a few minutes in memory of Dr. Fouts. He then stated that this resolution would be referred to the reference committee on officers, or Reference Committee No. 1.

Dr. Bradley asked Dr. R. B. Adams—in the absence of Dr. Fay Smith, Vice Speaker—to take the chair in order that he might address the house. After Dr. Bradley had read the "Remark by the Speaker of the House," Dr. Adams ruled that the speaker's report would be referred to the reference committee on officers.

Dr. Bradley again took the chair and stated the next order of business would be the appointment of Reference Committees. He further stated these committees would meet at 8 o'clock in the morning and again at 4 in the afternoon. The following list was then read, subject to the ratification of the House:

Reference Committee No. 1—Officers: Drs. Walter Benthack, Wm. Hamsa and R. E. Garlinghouse.

Reference Committee No. 2—Council: Drs. T. T. Smith, Isaiah Lukens and Morris Nielsen.

Reference Committee No. 3—Constitution and By-Laws: Drs. C. H. Babbitt, Fritz Teal and Richard Flebbe.

Reference Committee No. 4—Voluntary Prepayment Plan: Drs. Payson Adams, W. W. Carveth and R. C. Reeder.

Reference Committee No. 5—Planning: Drs. G. Paul Charlton, A. J. Offerman and Elton Newman.

Reference Committee No. 6—Public Health: F. A. Mounford, Donald Bucholz, W. C. Kenner.

Reference Committee No. 7—Miscellaneous: Drs. H. A. Blackstone, R. S. Wycoff and E. E. Koebbe.

A motion was made and seconded that the appointments be approved. The motion carried.

The chair recognized Mr. M. C. Smith, Executive Secretary, who made a few remarks relative to the exhibits and social activities during the Annual Session.

Dr. Bradley called for remarks and Dr. T. T. Smith stated that as a member of the Scientific Assembly Committee he would say such parties did cause the committee considerable difficulty; that in his opinion the House of Delegates should take some action. He then moved that the House of Delegates request the individuals or groups holding such cocktail parties which conflict with the hours of meetings planned for the Annual Session be cancelled for this meeting. The motion was seconded by Dr. H. A. Blackstone.

The chair called for further discussion, and Drs. McCarthy, Kenner, Payson Adams, Morgan and Nielsen all asked for permission of the floor and spoke briefly on the subject.

Dr. Blackstone suggested that perhaps the motion should be reworded and that we take a definite stand on this matter for next year. He further stated he would withdraw his second to the motion, with the consent of Doctor Smith.

Dr. Sheets stated he thought this was an administrative rather than a legislative problem; that he believed the Omaha-Douglas County Medical Society would be glad to conform to the wishes of the association; and that he, as President, would be glad to ask the individuals involved to dismiss their parties in sufficient time to attend the state association functions planned by the program committee.

Dr. Smith asked to withdraw the original motion and the chair recognized the withdrawal of both the motion and the second and declared the matter closed.

A recess was called by the chair for the purpose of selecting a Nominating Committee.

The House was again called to order by Dr. Bradley and the delegates from each councilor district were asked to name their selections. They were as follows:

1st District—Paul Read, M.D.
2nd District—Fritz Teal, M.D.
3rd District—
4th District—Walter Benthack, M.D.
5th District—Isaiah Lukens, M.D.
6th District—
7th District—A. I. Webman, M.D.
8th District—Wilber Johnson, M.D.
9th District—Wm. Nutzman, M.D.
10th District—G. Paul Charlton, M.D.
11th District—Richard Flebbe, M.D.
12th District—H. A. Blackstone, M. D.

Dr. Bradley stated that the Nominating Committee should meet at the close of the session and decide on the time and place to hold their meetings so that it could be put on the bulletin board in order that everybody would have this information.

A motion was made that these men be selected as the Nominating Committee. The motion was seconded and carried.

The chair called for committee reports and resolutions.

Dr. Morgan asked for permission of the floor and read the following resolution from the Lancaster County Medical Society:

WHEREAS, the attendance at required hospital staff meetings has become a burdensome responsibility in communities wherein there are more than one hospital, and

WHEREAS, attendance and interest in the County Medical Society is suffering by reason of the above, and

WHEREAS, the county medical society is the important unit in the solidarity of the physicians of city, county, state and nation, therefore

BE IT RESOLVED that the Lancaster County Medical Society instruct its delegates to present this resolution to the House of Delegates of the Nebraska State Medical Association at its next session, and

BE IT FURTHER RESOLVED, that the said House of Delegates instruct the Delegates to the American Medical Association to present a resolution to the House of Delegates of the American Medical Association asking that the officers and other proper officials take cognizance of the increasing number of hospital staff meetings that require attendance of the staff in order to preserve staff membership and hospital rating, and that it be pointed out to the said officers and officials that the activities and interests of the county medical society, both scientific and organizational, must at all times be paramount to those of hospital staffs, and

BE IT FURTHER RESOLVED, that the Delegates to the American Medical Association incorporate in their resolutions a request that the rules and regulations pertaining to hospital staff meetings be so modified as to permit the combining of staff meetings and clinical pathological conferences with county medical society meetings where such combinations are the de ire of the membership.

Passed by the Lancaster County Medical Society April 17, 1951.

The chair ruled this resolution should be considered by Reference Committee No. 4—Voluntary Prepayment Plan.

Dr. Paul Read presented the following resolution at the request of the American Academy of General Practice:

Resolution recommending that control of Professional Standards in Hospitals be vested in the AMERICAN MEDICAL ASSOCIATION.

WHEREAS, The American College of Surgeons has announced its decision to discontinue the program of hospitals standardization it has so ably conducted for many years; and

WHEREAS, The American Hospital Association Board of Trustees subsequently announced that the American Hospital Association would "assume full responsibility for the hospital standardization program now conducted by the American College of Surgeons," and its House of Delegates increased association dues to finance the program; and

WHEREAS, Objections raised by the American Medical Association, the American Academy of General Practice, and others, to control of hospital medical practice by the American Hospital Association led to a series of conferences between representatives of the American Medical Association, the American Hospital Association, and the American College of Surgeons; and

WHEREAS, A compromise agreement has now been proposed for the creation of a joint committee composed of representatives from the American Medical Association, the American Hospital Association, the American College of Surgeons, and the American College of Physicians, said committee to have complete authority over the evaluation and standardization of hospitals, including both administrative and professional aspects; and

WHEREAS, The evaluation and standardization of medical practice in hospitals is of such paramount importance to all branches of the medical profession that it should be under the sole and complete authority of the American Medical Association, which is the only medical organization representative of the entire profession in America and in which all segments of the profession have official democratic means for expressing their views on matters of such importance as the control of hospital medical practice; and

WHEREAS, The creation of an extramural committee with authority over this important aspect of modern medical practice would deny those branches of the profession not officially represented on such committee an official voice in the establishment and control of policies and procedures; now therefore be it

RESOLVED: That, regardless of what other organizations may undertake in connection with the standardization of nonprofessional matters in hospitals, the sole responsibility for the evaluation, standardization, and control of medical practice in hospitals should be vested in the Council on Medical Education and Hospitals of the American Medical Association.

The chair stated this would be referred to Reference Committee No. 5—Planning.

Dr. W. J. Arrasmith was granted permission of the floor and read the following resolution from the Hall County Medical Society:

The Hall County Medical Society at its regular meeting on April 11, 1951, passed the following resolution:

"The Hall County Medical Society understands that the Committee of the Nebraska State Medical Association headed by Dr. Roy H. Whitham of Lincoln, Nebraska, which is to make recommendations to the draft authorities concerning the doctors draft, is composed of a secret membership.

> It is resolved by the Hall County Medical Society that such secrecy is to be deplored as undemocratic and contrary to the democratic process, and that the Nebraska State Medical Society should use its influence to make the membership of this committee public.
>
> The Delegates of the Hall County Medical Society is instructed to introduce this resolution to the 1951 Annual Meeting of the House of Delegates of the Nebraska State Medical Society and to obtain support for its recognition."
>
> The Hall County Medical Society at its regular meeting on April 11, 1951, also voted that the Delegates be instructed to sanction the following resolution, proposed by the Adams County Medical Society, at the regular 1951 meeting of the House of Delegates of the Nebraska State Medical Association.
>
> "That the mandatory membership and payment of dues to the A.M.A. as a prerequisite to membership to the State and County Medical Societies be rescinded."

The chair stated this resolution would be referred to Reference Committee No. 5—Planning.

Dr. G. Paul Charlton read the following resolution from the Adams County Medical Society:

At a special meeting of the Adams County Medical Society on March 19, 1951, there was considerable objection voiced by the membership of this society to the mandatory membership and payment of dues to the American Medical Association as a prerequisite to membership in the state and county medical societies. It was the feeling of many of the doctors that this particular matter is of wide interest to physicians over the entire state and for that reason the following resolution is presented by this society with the respectful request that you bring this up at the next meeting of your own society and then take what action in the matter you deem appropriate.

The resolution above referred to is as follows:

> "Resolved that the duly elected delegate and alternate of the Saunders County Medical Society be instructed to bring before the House of Delegates of the Nebraska State Medical Association at its annual meeting this spring the following resolution:
>
> "That the mandatory membership and payment of dues to the A.M.A. as a prerequisite to membership in the state and county medical societies be rescinded."

The chair ruled this resolution would be referred to Reference Committee No. 5—Planning.

Dr. M. P. Williams read the following resolution from the Saunders County Medical Society:

At a meeting of the Saunders County Medical Society on April 6, 1951, a resolution was passed protesting to the mandatory membership and payment of dues to the American Medical Association as a prerequisite to membership in the state and county medical societies.

The resolution is as follows:

> "Resolved that the duly elected delegate and alternate of the Saunders County Medical Society be instructed to bring before the House of Delegates of the Nebraska State Medical Association at its annual meeting this spring and the following resolution:
>
> "That the mandatory membership and payment of dues to the A.M.A. as a prerequisite to the membership in the state and county medical societies be rescinded."

Dr. Bradley stated the foregoing resolution would be referred to Reference Committe No. 5—Planning.

Dr. Sheets was asked if he cared to make any remarks to the House of Delegates. He thanked Dr. Bradley and spoke briefly to the House.

Dr. Bradley asked that the chairman of each reference committee come to the desk after the meeting and secure the list of resolutions and reports his committee was to review; also, that he would again stress that each committee would meet in assigned rooms that would be posted on a bulletin board shortly after the meeting. He suggested that the Nominating Committe be sure to leave with the chair the time the committee would be in session.

Dr. Morgan called the attention of the House to the Thursday noon luncheon and program following. He stated that the winner of the essay contest sponsored by the Woman's Auxiliary to the Nebraska State Medical Association would be presented, and also that Dr. Ronald J. Cowling, President Emeritus of Carleton College, had been sesured to speak at this joint meeting of the Nebraska State Medical Association and the Woman's Auxiliary and that he hoped everyone would plan to attend and show their support of the auxiliary who had done such a good job.

Dr. Bradley stated that the House would again meet at 12:30 Tuesday; at 8 a.m. Wednesday, and again at 8 a.m. Thursday morning.

There being no further business, the house was declared adjourned until 12:30 o'clock Tuesday, May 1, 1951.

HOUSE OF DELEGATES

May 1, 1951

The second session of the House of Delegates was called to order at 12:30 p.m. by Dr. J. D. Bradley, Speaker of the House of Delegates, in Parlor C. Hotel Paxton, Omaha. Forty-two members were present.

Dr. R. B. Adams read the minutes of the first session, and as there were no corrections the chair rules they would stand approved as read.

The chair called for unfinished business.

Dr. Bradley called the attention of the house to the vacancy on the Nominating Committee of a representative from the 3rd district; also, that a Dr. French had been named from the 6th district and according to the records there was no doctor by that name seated in the House of Delegates. He stated that a call to fill these vacancies would be made later.

New business was called for and none was presented. The chair then called for further committee reports or resolutions and stated one resolution had been given to him; however, the doctor making the original presentation was not present so Dr. W. R. Hamsa was asked to check the resolution and see if he would want to read it later.

The next order of business was the reports of reference committees.

Dr. Benthack read the report of Reference Committee No. 1—Officers, and asked that each section be acted upon as presented.

"Section 1. The report of the Secretary-Treasurer was considered and a motion was made that this report be accepted. The motion was seconded and carried.

"Mr. Speaker, I move the adoption of this section of the report."

The motion was seconded and carried.

"Section 2. The report of the Executive Secretary was considered and a motion was made and seconded that the report be approved. The motion carried.

"Mr. Speaker, I move the adoption of this section of the report."

The motion was seconded and carried.

"'Section 3. The report of the Board of Trustees was considered and a motion was made that the report, including the budget, be accepted. The motion was seconded and carried.

"Mr. Speaker, I move the adoption of this section of the report."

The motion was seconded and carried.

"Section 4. The report of the Editor of the Nebraska State Medical Journal was considered and a motion was made that the report be accepted. The motion was seconded and carried.

"Mr. Speaker, I move the adoption of this section of the report."

The motion was seconded and carried.

"Section 5. The report of the Delegate to the North Central Conference was reviewed and a motion was made to accept this report. The motion was seconded and carried.

"Mr. Speaker, I move the adoption of this section of the report."

The motion was seconded and carried.

Dr. Benthack stated that attention of the House should be called to the fact that Dr. Floyd Rogers had been elected President-Elect of the North Central Conference and the House should take cognizance of Dr. Rogers services to this group.

"Section 6. The report of the Delegates to the A.M.A. — both the June and December interim — had been considered and a motion was made that these reports be accepted. The motion was seconded and carried.

"Mr. Speaker, I move the adoption of this section of the report."

The motion was seconded and carried.

Section 7. The resolution presented in memory of Dr. Roy W. Fouts was considered and approved, and a motion was made and seconded that the committee adopt the resolution. The motion carried.

"Mr. Speaker, I move the adoption of this section of the report."

The motion was seconded and carried.

"The remarks of Mr. M. C. Smith, Executive Secretary, were considered but it was the opinion of the committee that this matter had been disposed of in the first session of the House of Delegates."

Dr. Benthack stated that the study of the Medicolegal Committee report had not been completed and that probably this portion of their report would be given later.

Dr. Adams asked permission of the floor and stated that there had only been one threat filed since the completion of Dr. Fouts report to the Council.

Dr. Benthack then stated that with the approval of the other members of the committee he would make the motion that the report of the Medicolegal Committee be accepted, and would so move that this section of the report be adopted. The motion was seconded and carried.

Dr. Hamsa read the following resolution:

WHEREAS, the medical profession throughout history has assumed the responsibility for the sound education of physicians, and

WHEREAS, the American Medical Association since 1916 has devoted a large portion of its activities in the leadership for better medical education and practice, and

WHERAS, the quality of medical education in the State of Nebraska has declined seriously in recent decades, and

WHEREAS, the citizens of the State of Nebraska should have and should demand the best medical care in keeping with the great progress of the medical sciences in recent years, and

WHEREAS, the training of physicans takes approximately seven years and the medical student of today will be the physician of the future, therefore,

BE IT RESOLVED that the Nebraska State Medical Association recognizes the serious implications of the present decline in medical education in the State of Nebraska and pledges itself to foster and actively promote a rapid correction of this decline, and a continued promotion of the best in medical education.

The chair ruled this resolution would be referred to Reference Committee No. 5—Planning.

Dr. Bradley asked permission to digress a bit and stated that as a whole the reference committees were functioning quite well; however, there were a few members who did not understand and the point was made that all reports go to reference committees, the reference committee discusses them and, as was explained yesterday, the time and place of meeting of each committee is posted on the bulletin board and it was the hope of the chair that the members would take cognizance of this fact and each committee carry out its meeting as scheduled. He pointed out that this morning at 8 o'clock when several of the committees were not present there were several members of the association present who wished to discuss their problem with the committees and the committees were not there. This makes it rather difficult — and especially on the speaker — so please heed the bulletin board.

Dr. G. Paul Charlton gave the report of Reference Committee No. 5—Planning. It was as follows:

"No. 1. Your reference committee on Planning move that the report of the permanent Committee on Planning be approved.

"Mr. Speaker, I move the adoption of this section of the report."

The motion was seconded and carried.

"No. 2. The reference committee on Planning moves the approval of the Public Relations Committee report."

The motion was seconded and carried.

"No. 3. The reference committee on Planning moves the approval of the Report of the Committee on Hospital and Professional Relations, including the resolution to Blue Cross."

The motion was seconded and carried.

"No. 4. The reference committee on Planning moves the disapproval of the resolution of the Hall County Medical Society that secrecy in the membership of the doctors draft committee is to be deplored as undemocratic and contrary to the democratic process and that the Nebraska State Medical Society should use its influence to make the membership of this committee public."

The motion was seconded.

The chair called for discussion and Dr. J. L. McFee raised the question as to how this matter was handled in other states. No definite information was available but it was stated that a great many of the committees over the country were secret committees. General discussion followed, too, relative to the reasons it was best for the committee to remain unknown.

The question was called for and the motion carried.

"No. 5. The reference committee on Planning moves the disapproval of the resolutions of the Adams and Saunders county Medical Societies that 'the mandatory membership and payment of dues to the A.M.A. as a prerequisite to membership to the state and county medical societies be recinded'."

The motion was seconded and carried.

"No. 6. Reference Committee on Planning moves the adoption of the resolution recommending that control of professional standards in hospitals be vested in the American Medical Association, and regardless of what other organizations may undertake in connection with the standardization of non-professional matters in hospitals, the sole responsibility for the evaluation, standardization and control of medical practice in hospitals be vested in the Council on Medical Education and Hospitals of the A.M.A.

"It is further recommended by the Reference Committee on Planning that the following resolution be added to the above:

> 'Be it further resolved that a copy of this resolution be furnished each Nebraska delegate to the American Medical Association with instructions that it be presented to the House of Delegates of the A.M.A. at its annual session in June, 1951.' "

The motion was seconded and carried.

A motion was made that the report of Reference Committee No. 5—Planning, be adopted as a whole. The motion was seconded and carried.

Dr. F. A. Mountford read the report of the Reference Committee No. 6—Public Health, as follows:

"The Reference Committee on Public Health moves that the report of the Committee on Emergency Medical Service be accepted."

The motion was seconded and carried.

"The Reference Committee on Public Health studied the report of the Committee on Material and Child Health and recommends that the report be accepted with the exception of suggestion 3 which reads: 'That authority be given this committee, or a special committee, to review the material death records and fix responsibility for the deaths.' "

A motion was made to accept this section of the report. The motion was seconded and carried.

"The Reference Committee on Public Health moves that the report of the Tuberculosis Committee be accepted."

A motion was made to adopt this section of the report. The motion was seconded and carried:

"The Reference Committee on Public Health moves that the report of the Rural Medical Service Committee be accepted as published. I so move that this section of the report be adopted."

The motion was seconded and carried.

A motion was made that the report of Reference Committee No. 6—Public Health, be adopted as a whole. The motion was seconded and carried.

Dr. Bradley announced that the Nominating Committee would meet in Parlor G at 4:30 this afternoon and again tomorrow afternoon at 1:00, and again tomorrow afternoon at 4 o'clock.

Dr. Walter Benthack made the suggestion that this information be circulated among the members because the Nominating Committee would welcome and want their suggestions.

Dr. Adams made the announcement that inasmuch as the Nominating Committee would be meeting in Parlor G that the Council would meet at 5 in Parlor C.

Dr. Payson Adams read the following list of Honorary Memberships presented by the Omaha-Douglas County Medical Society: Drs. B. M. Riley, Stanley G. Reed, Chas. W. Pollard and Olga Statsny.

The chair ruled this matter would be referred to Reference Committee No. 2—Council.

Dr. Bradley called attention to the two vacancies in the Nominating Committee; namely, representatives from the 3rd and 6th districts.

A motion was made that Dr. W. E. Shook be seated as the member of the Nominating Committee from District No. 3. The motion was seconded and carried.

A motion was made that Dr. R. E. Harry be seated as a member of the Nominating Committee from District No. 6. The motion was seconded and carried.

Dr. McCarthy spoke briefly relative to the World Medical Association and stated there was literature and application blanks on a table in the exhibit space regarding this organization. He asked that the members give this material consideration.

Dr. Bradley called attention to the fact that any changes proposed for the Constitution would have to lay over one year after the first reading and any proposed changes to the By-Laws would have to be presented so that they could lay on the table 24 hours before being acted upon.

The House adjourned until 8 o'clock Wednesday, May 2, 1951.

HOUSE OF DELEGATES

May 2, 1951

The third session of the House of Delegates was called to order by Dr. J. D. Bradley, Speaker of the House of Delegates, at 8 o'clock in Parlor C, Hotel Paxton, Omaha. Thirty-four members were present.

The minutes of the second session were read by Dr. R. B. Adams and approved as read.

The chair called for unfinished business but nothing was presented.

New business was called for and Dr. James Kelly, at the request of the Council, spoke briefly to the House relative to the change of name of the Tuberculosis Association to the Tuberculosis and Health Association which is being advocated.

Dr. W. R. Hamsa read the following resolution:

"Since the Nebraska Tuberculosis Association is still endeavoring to change its name at the county level to include 'health' as well as 'tuberculosis', when the previous attempts to include 'health' in the name of the organization at the national and state levels has been rejected at those levels, it seems that it is the duty of this body to condemn the attempt to make this change at the county level. Therefore, it is requested that no support from the members of this association be given to the Tuberculosis Association in any county of this state where such changes are made.

"The headquarters of the State Tuberculosis Association should be notified that the state medical association will promptly withdraw its participation and support of the activities of the Tuberculosis Association if they insist on changing the names of its component units at the county, or district, level throughout the state."

The chair ruled this report and resolution would be referred to Reference Committee No. 5—Planning.

Dr. Wycoff asked for permission of the floor and stated that inasmuch as there was quite a lot of work connected with any reference committee on Constitution and By-Laws that some help should be given this group and perhaps it could be accomplished by the appointment of a committee which would keep up to date on all changes and could confer and clarify the Constitution and By-Laws.

A motion was made that the chair appoint a standing committee of 3 delegates to be known as the Constitution and By-Laws Committee. The motion was seconded and carried.

The question was raised as to whether or not the chair could appoint such a committee, and the chair, after reading paragraph 7, Section 1, Chapter VII, of the By-Laws, ruled he had the right to appoint such a committee.

Report of the Reference Committee No. 7. Miscellaneous Affairs, was called for and Dr. H. A. Blackstone read the following report:

"Your committee met as instructed, and considered reports of the following committees:

"Cancer Cardiovascular, Cerebral Palsy, Allied Professions, Diabetes, Classification of Cervical Cancer, Fracture, Auxiliary, Mental Hygiene.

"The report of the Cancer Committee shows a considerable activity during the year, particularly in the field of lay education, and the carrying on of the tumor clinics.

"This Committee on Miscellaneous Affairs wishes particularly to urge all physicians to be active in assisting and urging the formation of Tumor Clinics in those areas that do not now have them.

"Mr. Speaker, I move the adoption of the report of the Cancer Committee as published in the Annual Reports."

The motion was seconded and carried.

"The report of the Cardiovascular Committee indicates cooperation with the American Heart Association in the recognition of February as 'Heart Month', and in assisting in devoting the February issue of the state Journal on the subject of Heart Disease.

"Mr. Speaker, I move the adoption of the report of the Cardiovascular Committee, as published in the annual reports."

The motion was seconded and carried.

"The report of the Cerebral Palsy Committee embodies one suggestion to which this reference committee particularly wishes to draw to your attention. That is the recommendation to the state Board of Control that they consider the establishment of a unit in the Orthopedic Hospital for the treatment of cerebral-palsied patients. This report indicates that such a unit is being favorably considered by the Board of Control.

"Mr. Speaker, I move the adoption of the report of the Cerebral Palsy Committee as published in the Annual Reports."

The motion was seconded and carried.

"The report of the Committee on Allied Professions recommends that it be directed to continue cooperation along the lines indicated in the report for the past year. Their efforts in the past year have been instrumental in securing from the Nebraska State Nurses Association a resolution opposing Compulsory Health Insurance.

"Mr. Speaker, I move the adoption of the report of the Committee on Allied Professions as published in the Annual Reports."

The motion was seconded and carried.

"The report of the Diabetes Committee shows considerable activity, including news releases to newspapers and radio; letters to all universities and colleges in the state, and to secretaries of all component medical societies, urging the performance of tests for detection of diabetes, particularly during Diabetes Week; and the arrangement through the Speakers' Bureau for speakers on this subject.

"This reporting committee feels that the Diabetes Committee should be particularly commended for its work in connection with Diabetes Week.

"Mr. Speaker, I move the adoption of the report of the Diabetes Committee as published in the Annual Reports."

The motion was seconded and carried.

"The report of the Committee on Classification of Cervical Cancer has been reviewed by this reference committee.

"The purpose of the resolution contained therein is to bring into use in this state a classification of cervical cancer which shall be in accord with that now in use in most other counties; thus aiding in the adoption of a universal classification.

"Mr. Speaker, I move the adoption of the report of the Committee on Classification of Cervical Cancer."

The motion was seconded and carried.

"The report of the Fracture Committee embodies some suggestions for local society meetings which seem to this reference committee to be very practical, and carries as well an offer of their assistance in stimulating interest in this particular type of work.

"Mr. Speaker, I move the adoption of the report of the Fracture Committee as published in the Annual Reports."

The motion was seconded and carried.

"There have been no reports from the Committee on Mental Hygiene and the Auxiliary."

"Mr. Speaker, I move the adoption of the report of the Miscellaneous Reference Committee as a whole."

The motion was seconded and carried.

The chair asked permission to digress a bit and commend Reference Committee No. 7 for the splendid manner in which their report was written and presented.

Dr. Offerman gave a supplementary report for Reference Committee No. 5—Planning, and made the motion that the resolution as described concerning the help and support of the medical association to the medical schools in the State of Nebraska be accepted and adopted. The motion was seconded and carried.

Dr. Morris Nielsen gave the report of Reference Committee No. 2—Council.

Dr. Nielsen stated there was no report submitted for the Committee on Library, Necrology and Records. He further stated that the committee had studied the report of the Audit and that the committee endorsed it in full and moved its adoption as printed. The motion was seconded and carried.

Dr. Nielsen read the report of the Medical Service Committee and stated the report had been reviewed and the committee moved that the report be accepted and adopted. The motion was seconded and carried.

Dr. Nielsen reported that after checking the eligibility requirements for honorary memberships there were two names—Drs. B. M. Riley and Olga Stastny from Omaha—that were eligible for honorary memberships. The committee moved that these memberships be granted. The motion was seconded.

Discussion followed and it was established that membership classification had not been presented as yet by the reference committee handling this matter and it would be best to hold the action on these memberships until clarification later. A motion was made that the original motion be tabled. It was seconded and carried.

A motion was made that the House adopt the two sections of Dr. Nielsen's report — Audit and Medical Service Committee report. The motion was seconded and carried.

The report of Reference Committee No. 4—Voluntary Prepayment, was read by Dr. Robert Reeder:

> "The committee on Prepayment Medical Care recommends that the report of the Prepayment Medical Care Committee as published in the annual report, pages 33-36 inclusive, and the April 1951 Nebraska State Medical Journal, pages 145-147, be accepted by the House of Delegates as published. It further recommends that the general report of the Blue Shield for the year 1950 and the audit by Hillmer-Nelson Company of Omaha be accepted as published.
>
> "Mr. Speaker, I move the adoption of this section of the report."

The motion was seconded and carried.

> "The committee has studied the resolution as presented by the Lancaster County Medical Society on April 17, 1951, and the committee recommends that the House of Delegates approve such resolution. It is further recommended by the committee that this resolution, if passed, be circulated to the adjoining state medical societies.
>
> "Mr. Speaker, I move the adoption of this section of the report."

The motion was seconded and carried.

A motion was made that the report of Reference Committee No. 4—Voluntary Prepayment plan, be adopted as a whole. The motion was seconded and carried.

Dr. Fritz Teal read the report of Reference Committee No. 3—Constitution and By-Laws, which was as follows:

REPORT OF REFERENCE COMMITTEE NO. 3
CONSTITUTION AND BY-LAWS

"Item 1. Proposed change in the Constiution:

> "Delete Section 1, Article IV—Membership, which now reads: 'Membership in this Association and in the American Medical Association shall be attained only through membership in one of the component societies of this Association, as provided in the By-Laws.'

and substitute the following:

> "Section 1. Membership in the Nebraska State Medical Association shall be attained only by those who are active members of a component society of this association and the American Medical Association as provided in the By-Laws.'

"Item 2. Proposed change in the Constitution:

> "Amend Article VI—Officers and Boards, Section 2, by adding to paragraph 1 the following: 'for the unexpired term.' Thus making paragraph 1 read:
>
> 'The President shall serve for a term of one year. Should the President die, resign or be removed from office the Vice President shall automatically become President for the unexpired term.'
>
> "Also amend Article VI, Section 5, paragraph 2, by adding the word 'constitutional' immediately after the word 'any', thus making the paragraph read:
>
> 'A member shall not be elected to any constitutional office unless he is registered and in attendance at the annual session at which he is nominated.'

The chair announced these two items of the report dealing with Constitutional changes would have to lay over one year.

> "Items 3. At the May 4, 1950, session of the House of Delegates a proposal was made to amend Article VI, Section 3, paragraph 3, of the Constitution which now reads: 'The Board of Councilors shall be vested with the judicial powers of the Association and such other authority as may be prescribed in the By-Laws', to read as follows:
>
> "The Council on Professional Ethics shall be vested with the judicial powers of the Association as now prescribed in the By-Laws.'

"Mr. Speaker, I so move the adoption of this change in the Constitution."

The motion was seconded, and after clarification of the point relative to the vote necessary to amend the Constitution, the original motion was carried.

> "Item 4. Proposed By-Law change:
>
> "Amend Chapter I, section 1, by substituting the words 'an active' for the word 'a' in the first sentence; also, by adding the words 'and the American Medical Association' immediately following the word 'societies' in the first sentence. To further amend Section 1 by adding in the second sentence immediately following the words 'component society' the words 'and the American Medical Association', thus making the section read:
>
> 'Section 1. A member of this Association must be an active member of one of the component societies and the American Medical As-

sociation. When he is certified to the Secretary-Treasurer of the Association as a member of a component society and the American Medical Association and classified as to type of membership by the secretary of the component society, his name shall be included in the official roster of the Association and he shall be entitled to all privileges of his class of membership."

"Item 5. Proposed By-Law change:

"Amend Chapter I, Section 2, by deleting the second sentence which now reads:

'Licentiates admitted under the law of 1881 and registered as regular physicians and who have continually practiced regular medicine in Nebraska may be admitted to membership.' "

"Item 6. Proposed By-Law changes:

"Further amend Chapter I, Section 3, by deleting the first paragraph which reads: 'Active members in good standing in their respective component societies shall be active members of this Association and the American Medical Association upon payment of dues and assessments for the current year.' and substituting the following:

'To maintain active membership in this Association, all members must pay dues and assessments as prescribed in the Constitution and By-Laws of the Nebraska State Medical Association and the American Medical Association.' "

"Item 7. Proposed By-Law changes:

"Further amend Chapter I, Section 7, by adding the words 'Council on Professional Ethics or' immediately before the words 'Board of Councilors', thus making the section read:

'A member not in good standing, expelled or suspended from his component society shall have like status in this Association. The right of appeal to the Council on Professional Ethics or Board of Councilors shall not be impaired, nor shall an appeal which is pending prevent carrying out the penalty imposed by the component society.' "

"Item 8. Proposed By-Law change:

"To amend Chapter II, Section 2, third paragraph, by adding the word 'state and American Medical Association dues and' immediately after the word 'its', thus making the paragraph read:

'The secretary of each component society shall forward to the Secretary-Treasurer of this Association on or before the last day of March of each year its state and American Medical Association dues and membership assessment, together with a roster of officers, delegates, alternates, members and non-affiliated physicians of the county.' "

"Item 9. Proposed By-Law changes:

"To amend Chapter XII, Section 5, paragraph 5, by inserting after the word 'council' the words 'on Professional Ethics', thus making the paragraph read:

'After deliberation, the Council on Professional Ethics shall have a choice of one of the five following dispositions:'"

"Item 10. Proposed By-Law changes:

"To amend Chapter XIII, Section 4, paragraph 2, second sentence, by transposing the words 'as prescribed in Chapter II, Section 2 of these By-Laws' to immediately follow the words 'Nebraska State Medical Association', thus making the sentence read:

'He shall remit membership dues to the Secretary of the Nebraska State Medical Association, as prescribed in Chapter II, Section 2 of these By-Laws, and he in turn shall remit to the treasurer of the American Medical Association the dues of that organization:' "

Item 11. The report of the Committee on Membership Classification was reviewed and revised as follows:

"By Laws, Chapter 1, Section 5—Delete the original section 5 and substitute the following:

"Life membership may be granted to a member in good standing who has been in practice for 45 years, upon written request to his component county society. The recommendation may be made by ⅔ vote of the Board of Councilors and by approval of the House of Delegates.

"Life membership may also be granted in a like manner to members in good standing who because of illness, disability or other good cause, are not able to continue the practice of medicine.

"All Life members shall be exempt from payment of dues, shall not vote nor hold office, but may participate and attend regular sessions and shall receive all publications and may become an associate member of the American Medical Association.

"Honorary membership may be bestowed on any member or individual for outstanding achievement in medicine or allied humanitarian service by ⅔ vote of the Board of Councilors and by approval of the House of Delegates.

"Honorary membership shall be accompanied by a suitable certificate. Honorary membership shall not affect the constitutional rights of an active member and does not relieve him of financial obligation and payment of dues. Non-members of this association who become Honorary members shall not pay dues nor enjoy constitutional privileges of this Association.

"The Nebraska State Medical Association may award a Certificate of Distinguished Service to a member in good standing, provided the nomination for such award be made by his component society or by ⅔ vote of the Board of Councilors and approval of the House of Delegates.

"Item 12. The revised fee schedule was reviewed and found to be satisfactory as recently published. The scheduled will be mailed to all members in the near future.

"In conclusion this committee recommends the formation of a permanent committee on Constitution and By-Laws.

"Mr. Speaker, I move the adoption of Item

12—which pertains to the fee schedule—of this report."

The motion was seconded and carried.

The chair again stated that Items 1 and 2—proposed changes in the Constitution—would have to lay over for one year; that Items 4 through 11 would have to lay on the table and then discussed at the next session. Dr. Bradley then stated that the motion had already been made and carried which would appoint the necessary committee on Constitution and By-Laws.

Dr. McCarthy asked for permission of the floor and took exception to the ruling of the chair as to the appointment of this committee, stating he did not have such authority.

Dr. Bradley again read Chapter VII, Section 1, paragraph 7, of the Constitution and stated his ruling would stand.

Dr. McCarthy again objected and Dr. Bradley ruled him out of order, but stated he had the right of appeal. Dr. McCarthy appealed the ruling.

Dr. Bradley stated that the speakers's ruling on Constitution and By-Laws had been appealed and asked the house for their wishes on the matter.

Dr. Fritz Teal suggested that perhaps a change in the terminology of the original motion would be all that was necessary and would clarify the matter.

Dr. Nielsen made the suggestion that perhaps Dr. Rudolph Decker might be able to give some information which would assist in a decision.

Dr. Bradley called for Dr. Decker to take the floor and Dr. Decker stated that provision had been made in the Constitution and By-Laws for standing committees, and if this was to be a standing committee it would take an amendment to the By-Laws to set it up as a standing committee, and that in this amendment to the By-Laws there should be a provision as to who should appoint the committtee. He further stated that there was a provision already in the By-Laws for the Speaker to appoint reference committees and special committees.

A motion was made to reconsider the original motion. The motion was seconded and carried.

Dr. Teal made the motion to amend the original motion so that in place of the appointment of a standing committee it would read the appointment of a special committee from the House of Delegates to act as an advisory committee on Constitution and By-Laws to the reference committee on Constitution and By-Laws. The motion was seconded and carried.

Dr. Bradley stated the House stood adjourned until 8 o'clock tomorrow morning, Thursday, May 3rd.

HOUSE OF DELEGATES
May 3, 1951

The final session of the House of Delegates was called to order by Dr. Fay Smith, Vice Speaker, at 8 o'clock May 3, 1951, in Parlor C, Hotel Paxton, Omaha, Nebraska. Registration showed 29 members present.

The minutes of the third session were read by Dr. Adams and approved as read.

The report of the Nominating Committee was read by Dr. Fritz Teal as follows:

"This committee, with all members present, met at 4:30 p.m. on May 1, and at 1 p.m. and 4 p.m. on May 2, and present the following nominees for the consideration of the House of Delegates:

President-Elect—Dr. Harold Morgan, Lincoln
Vice President—Dr. Rudolph Decker, Byron
Councilor, 1st District—Dr. James F. Kelly, Omaha
Councilor, 2nd District—Dr. W. C. Kenner, Nebraska City
Councilor, 3rd District—Dr. J. C. Waddell, Beatrice
Councilor, 4th District—Dr. W. E. Wright, Creighton
Delegate to A.M.A.—Dr. K. S. J. Hohlen, Lincoln
Alternate Delegate to A.M.A.—Dr. Earl Leininger, McCook
Committee on Journal and Publication—Dr. W. H. Heine, Fremont
Delegate to North Central Conference — Dr. Floyd Rogers, Lincoln
Board of Directors, Nebraska Medical Service—Dr. E. W. Bantin, Dr. W. W. Carveth, Dr. N. J. Everitt and Dr. J. Phil. Redgwick

A motion was made that the House adopt the report of the Nominating Committee. The motion was seconded and carried.

Nominations were called from the floor for each office but none were offered.

A motion was made that the nominations be closed and the secretary cast the unanimous ballot of the House of Delegates for the officers named. The motion was seconded and carried.

The secretary cast the unanimous ballot and the following became the newly elected officers of the Nebraska State Medical Association:

President-Elect—Harold S. Morgan, M.D., Lincoln
Vice President—Rudolph F. Decker, M.D., Byron
Councilor, 1st District—James F. Kelly, M.D., Omaha
Councilor, 2nd District—W. C. Kenner, M.D., Nebraska City
Councilor, 3rd District—J. C. Waddell, Beatrice
Councilor, 4th District—W. E. Wright, Creighton
Delegate to the A.M.A.—K. S. J. Hohlen, M.D., Lincoln
Alternate Delegate to the A.M.A.—Earl Leininger, M.D., McCook
Committee on Journal and Publication—W. H. Heine, M.D., Fremont
Delegate to the North Central Conference—Floyd L. Rogers, M.D., Lincoln
Board of Directors, Nebraska Medical Service—E. W. Bantin, M.D., Omaha, W. W. Carveth, M.D.. Lincoln, N. J. Everitt, M. D., Omaha and J. Phil Redgwick, M.D., Omaha

The chair appointed Dr. Fritz Teal and Dr. F. A. Mountford as the committee to bring Dr. Harold S. Morgan and Dr. Rudolph F. Decker before the House.

Dr. Smith called for reference committee reports. Dr. Morris Nielsen stated he had a supplementary report for Reference Committee No. 2—Council, and submitted the following names that had been recommended by the Council for Honorary Memberships: Drs. O. E. Longacre, Rising City, Butler County; H. W. Orr, Lincoln, Lancaster County; Olga Statsny and B. M. Riley, both of Omaha, Omaha-Douglas County.

A motion was made that the House approve these four names for Honorary Memberships. The motion was seconded and carried.

Dr. Fritz Teal presented Drs. Morgan and Decker to the House of Delegates as President-Elect and Vice President, respectively, of the Nebraska State Medical Association. They both thanked the membership for the honor bestowed upon them.

Dr. Smith then presented Dr. Rudolph Decker with a gavel on behalf of the Nebraska State Medical Association in appreciation of his twelve years of service as Speaker of the House of Delegates. Dr. Decker thanked the Association and the House of Delegates.

Dr. Earl Leininger asked for permission of the floor. The chair stated that inasmuch as this was new business, it was necessary to secure the

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consent of the House before Dr. Leininger could talk.

A motion was made that Dr. Leininger be given permission to present his business to the House. The motion was seconded and carried.

Dr. Leininger, Chairman of the Rural Medical Service Committee, spoke briefly of the plans this committee has to sponsor a pre-graduation day program for the senior medical students. He stated that it had been discussed with the Board of Trustees but that it was necessary to get the approval of the House to spend the required amount of money to put on the program.

The question was raised as to the amount necessary and it was the opinion of Dr. Leininger that while no exact amount could be named, he estimated around the neighborhood of $600.00 would be sufficient.

A motion was made that the House of Delegates go on record as approving such a program as outlined by Dr. Leininger to entertain the senior medical students at a one-day meeting and that such funds be appropriated for this committee to carry out their plans. The motion was seconded and carried.

The report of Reference Committee No. 3—Constitution and By-Laws was called for and Dr. Teal further explained the changes in the Constitution which comprise Items 1 and 2 in his report and which would have to lay over for one year. Item 3, dealing with the Constitutional change had been adopted at the previous session.

Item 4 of this report was next discussed. A motion was made that the House of Delegates adopt the change in Chapter I, Section 1 of the By-Laws as read by the committee. The motion was seconded and carried.

Item 5 was presented. This was the proposed By-Law change which amended Chapter I, Section 2.

A motion was made that the House adopt the change in Chapter I, Section 2, as read by the committee chairman. The motion was seconded and carried.

Item 6 was to further amend Chapter I, Section 3 of the By-Laws and was again read by Dr. Teal.

A motion was made that the House adopt this By-Law change as read. The motion was seconded and carried.

Item 7 was again read which proposed a change in Chapter I, Section 7 of the By-Laws.

A motion was made and seconded that the House adopt this change in the By-Laws. The motion carried.

Item 8 was reread which proposed a change in Chapter II, Section 2, third paragraph, of the By-Laws.

A motion was made that the House adopt this change. The motion was seconded and carried.

Item 9, a proposed change in Chapter XII, Section 5, Paragraph 5, of the By-Laws, was read by Dr. Teal.

A motion was made that this change be adopted. The motion was seconded and carried.

Item 10, proposed By-Law change to amend Chapter XIII, Section 4, Paragraph 2, second sentence, was again read by Dr. Teal.

A motion was made and seconded that the House adopt this change. The motion carried.

Item 11 was presented by Dr. Teal. This was another By-Law change which affected Chapter I, Section 5, and which pertained to classification of memberships.

A motion was made that the House adopt this change as read. The motion was seconded and carried.

Dr. J. D. Bradley, Speaker of the House, took the chair.

A motion was made that the report of Reference Committee No. 3 — Constitution and By-Laws, be adopted as a whole. The motion was seconded and carried.

A motion was made that the members of this association who have become Honorary Members in the past that their status be changed to Life Members. The motion was seconded and carried.

Dr. Hamsa read the resolution presented at the May 2nd session against the proposed change in name of the Nebraska Tuberculosis Association to the Nebraska Tuberculosis and Health Association, then made the motion that the resolution be adopted. The motion was seconded and carried.

The fixing of the place for the 1952 session was the next order of business and Dr. Teal stated he would like to extend the invitation of the Lancaster County Medical Society to the association to hold their 1952 Annual Session in Lincoln, Nebraska.

A motion was made to accept the invitation. The motion was seconded and carried.

Dr. Bradley read the telegram from Mr. Al Lew of the Hotel Cornhusker offering the facilities of that hotel for the 1952 meeting.

A motion was made that the secretary be instructed to send the proper letters of appreciation to the Paxton Hotel, the Omaha-Douglas County Medical Society and the Chamber of Commerce for the fine manner in which the association was taken care of during the 1951 session. The motion was seconded and carried.

Dr. Bradley stated the chair had one further order of business at this time, and that he would like to appoint the following members on the Committee on Constitution and By-Laws:

Dr. Fritz Teal, Chairman, Lincoln
Dr. R. S. Wycoff, Lexington
Dr. R. E. Garlinghouse, Lincoln
ex officio members—Chair and Secretary-Treasurer

Dr. Bradley thanked the members of the House for their kindness and help in conducting the business of the sessions.

Dr. Harold Morgan asked for permission of the floor. He called the attention of the delegates to the noon luncheon and urged that every member stay for the afternoon session if at all possible.

ADJOURNED.

ANNOUNCEMENT

Fifth Annual Rocky Mountain Cancer Conference will be held in Denver, Colorado, July 11 and 12, 1951. Headquarters at Shirley-Savoy hotel. The conference is sponsored by: Colorado State Medical Society and Colorado Division, American Cancer Society.

HOUSE OF DELEGATES
May 1, 2, 3, and 4, 1951

County	Session 1st	2nd	3rd	4th
ADAMS—				
G. Paul Charlton, M.D., Hastings (D)	P	P		P
L. F. Egen, M.D., Hastings (A)				
BOONE—				
Elton Neyman, M.D., Albion (D)	P	P		
H. C. Henderson, M.D., St. Edward (A)				
BOX BUTTE—				
Robert J. Morgan, M.D., Alliance (D)				
W. L. Howell, M.D., Hyannis (A)				
BUFFALO—				
Dan A. Nye, M.D., Kearney (D)				
Wm. Nutzmann, M.D., Kearney (A)	P	P	P	P
BURT—				
I. Lukens, M.D., Tekamah (D)	P	P		
J. G. Allen, M.D., Tekamah (A)				
BUTLER—				
D. E. Burdick, M.D., David City (D)				
L. J. Ekeler, M.D., David City (A)				
CASS—				
R. R. Anderson, M.D., Nehawka (D)	P	P	P	
None Certified				
CEDAR-DIXON-DAKOTA THURSTON-WAYNE—				
Walter Benthack, M.D., Wayne (D)	P	P	P	P
R. M. Matson, M.D., Wayne (A)				
R. P. Carroll, M.D., Laurel (D)		P		P
F. G. Dewey, M.D., Coleridge (A)				
C. M. Coe, M.D., Wakefield (D)	P	P	P	
R. E. Bray, M.D., Ponca (A)				
Clarence A. Pierson, M.D., Pender (D)	P	P		
Clayton E. Buhl, M.D., Pender (A)				
CHEYENNE-KIMBALL-DEUEL—				
B. H. Grimm, M.D., Sidney (D)				
C. N. Babbitt, M.D., Sidney (A)	P	P	P	P
CLAY—				
H. V. Nuss, M.D., Sutton (D)				P
None Certified				
COLFAX—				
W. J. Kavan, M.D., Clarkson (D)				
H. Dey Myers, Jr., M.D., Schuyler (A)				
CUSTER—				
R. D. Bryson, M.D., Calloway (D)				
Theo. Koefoot, M.D., Broken Bow (A)				
DAWSON—				
R. S. Wycoff, M.D., Lexington (D)	P	P	P	P
A. W. Anderson, M.D., Lexington (A)				
DODGE—				
Robert C. Reeder, M.D., Fremont (D)	P	P	P	P
D. B. Wengert, M.D., Fremont (A)				
FILLMORE—				
V. V. Smrha, M.D., Milligan (D)				
C. F. Ashby, M.D., Geneva (A)				
FRANKLIN—				
W. A. Doering, M.D., Franklin (D)				
L. S. McNeill, M.D., Campbell (A)				
FOUR COUNTY—				
Robert J. Lynn, M.D., Ord (D)	P			
GAGE—				
W. W. Waddell, M.D., Beatrice (D)				
H. D. Runty, M.D., DeWitt (A)	P	P	P	P
GARDEN-KEITH-PERKINS—				
J. L. McFee, M.D., Ogallala (D)	P	P	P	
Willard Seng, M.D., Oshkosh (A)				
HALL—				
W. J. Arrasmith, M. D., Gr. Island (D)	P	P		
C. H. Maggiore, M.D., Gr. Island (A)				
HAMILTON—				
J. M. Woodward, M.D., Aurora (D)	P			
E. H. Steenburg, M.D., Aurora (A)				
HARLAN—				
Paul I. Ekart, M.D., Alma (D)				
K. C. McGrew, M.D., Orleans (A)				
HOLT and NORTHWEST—				
Wilber Johnson, M.D., Valentine (D)4	P	P		
Thomas Deakin, M.D., Valentine (A)				
HOWARD—				
J. Y. Racines, M.D., Palmer (D)		P	P	P
E. C. Hanish, Jr., M.D., St. Paul (A)				
JEFFERSON—				
D. B. Kantor, M.D., Fairbury (D)				
JOHNSON—				
R. H. McCoy, M.D., Tecumseh (D)		P		
J. A. Lanspa, M.D., Tecumseh (A)				
LANCASTER—				
E. W. Hancock, M.D., Lincoln (D)				
W. W. Carveth, M.D., Lincoln (A)	P	P	P	P
H. S. Morgan, M.D., Lincoln (D)	P	P	P	P
E. E. Angle, M.D., Lincoln (A)				
E S. Wegner, M.D., Lincoln (D)				
R. E. Garlinghouse, M.D., Lincoln (A)	P	P	P	P
Fritz Teal, M.D., Lincoln (D)	P	P	P	P
J. C. Peterson, M.D., Lincoln (A)				
LINCOLN—				
Richard Flebbe, M.D., Sutherland (D)	P	P	P	
A. J. Callaghan, M.D., N. Platte (A)				
MADISON SIX—				
G. B. Salter, M.D., Norfolk (D)				
A. C. Barry, M.D., Norfolk (A)				
J. D. Reid, M.D., Pilger (D)				
H. S. Tennant, M.D., Stanton (A)			P	P
I. L. Thompson, M.D., West Point (D)				
W. D. Hanson, M.D., Wisner (A)				
W. I. Devers, M.D., Pierce (D)				
J. H. Calvert, M.D., Pierce (A)	P	P	P	P
W. W. Graham, M.D., Elgin (D)	P	P	P	P
E. E. Curtis, M.D., Neligh (A)				
R. H. Kohtz, M.D., Bloomfield (D)				
R. E. Johnson, M.D., Wausa (A)				
MERRICK—				
L. C. Holmes, M.D., Central City (D)				
NANCE—				
Kenneth R. Dalton, M.D., Genoa (D)				
James C. Maly, M.D., Fullerton (A)				
NEMAHA—				
Edgar Cline, M.D., Auburn (D)				
R. C. Fenstermacher, M.D., Auburn (A)				
NORTHWEST NEBRASKA—				
F. W. Wanek, M.D., Gordon (D)		P		
H. V. Crum, M.D., Rushville (A)				
NUCHOLLS—				
A. I. Webman, M.D., Superior (D)	P	P	P	P
Byron L. Brown, M.D., Superior (A)				
OMAHA-DOUGLAS—				
Sven Isacson, M.D., Omaha (D)				
W. R. Hamsa, M.D., Omaha (A)	P	P	P	P
Payson Adams, M.D., Omaha (D)	P	P	P	P
Leo Hughes, M.D., Omaha (A)				
Paul S. Read, M. D., Omaha (D)	P	P	P	P
Meyer Beber, M.D., Omaha (A)				
Chas. J. Shramek, M.D., Omaha (D)				
A. C. Johnson, M.D., Omaha (A)				
James D. Bradley, M.D., Omaha (D)	P	P	P	P
Geo. Alliband, M.D., Omaha (A)				
Donald J. Bucholz, M.D., Omaha (D)	P	P	P	
R. J. Fitzgibbons, M.D., Omaha (A)				
A. J. Offerman, M.D., Omaha (D)	P	P	P	P
S. T. Mangimelli, M.D., Omaha (A)				
Thos. T. Smith, M.D., Omaha (D)	P	P	P	P
Stanley E. Potter, M.D., Omaha (A)				
OTOE—				
W. C. Kenner, M.D., Nebraska City (D)	P	P	P	P
D. D. Stonecypher, M.D., Nebr. City (A)				
PAWNEE—				
A. B. Anderson, M.D., Pawnee City (D)				
H. C. Stewart, M.D., Pawnee City (A)				
PHELPS—				
H. A. McCanahay, M.D., Holdrege (D)		P	P	P
Theo. Peterson, M.D., Holdrege (A)				
PLATTE—				
E. E. Koebbe, M.D., Columbus (D)	P	P	P	
C. H. Campbell, M.D., Columbus (A)				
POLK—				
H. S. Eklund, M.D., Osceola (D)				
C. L. Anderson, M.D., Stromsburg (A)				
RICHARDSON—				
W. E. Shook, M.D., Shubert (D)		P	P	P
E. Lenneman, M.D., Falls City (A)				
SALINE—				
Paul Huber, M.D., Crete (D)				
R. W. Homan, M.D., Crete (A)				
SAUNDERS—				
W. W. Noyes, M.D., Ceresco (D)				
M. P. Williams, M.D., Ashland (A)	P			
SCOTTSBLUFF—				
H. A. Blackstone, M.D., Bridgeport (D)		P	P	P
W. C. Harvey, M.D., Gering (A)				
SEWARD—				
C. F. Hille, M.D., Beaver Crossing (D)				
W. R. Hill, M.D., Milford (A)				
SOUTHEST NEBRASKA—				
Clarence Minnick, M.D., Cambridge (D)				
THAYER—				
F. A. Mountford, M.D., Davenport (D)	P	P	P	P
Paul A. Reed, M.D., Deshler (A)				
WASHINGTON—				
Morris Neilsen, M.D., Blair (D)	P	P	P	P
C. D. Howard, M.D., Blair (A)				
WEBSTER—				
YORK—				
H. O. Bell, M.D., York (D)				
R. E. Harry, M.D., York (A)		P	P	

Know Your Blue Shield Plan

Physicians wishing to have a dispenser for Blue Cross-Blue Shield literature may secure one by addressing a request to: Public Relations Department, Blue Shield Plan, 518 Kilpatrick Building, Omaha 2, Nebraska.

The 1950 growth in Blue Shield enrollment over the nation was the greatest in the history of the non-profit medical care plans. More than five million members joined the seventy prepayment medical care plans which are sponsored by state and county medical societies. Total Blue Shield membership now approaches twenty million.

Reminder: Non-Group membership in Blue Cross-Blue Shield is still available to persons under age 65 who are self-employed or who work where there are fewer than four employees. These are the standard enrollment requirements for Non-Group membership. During the special Non-Group campaign conducted during April, the employment requirement was waived, and membership was offered to anyone under age 65, regardless of employment status.

All physicians in Nebraska will soon receive a copy of the Report of the Prepayment Medical Care Committee which was unanimously approved on May 3, 1951, by the House of Delegates of the Nebraska State Medical Association. Included in the report is a summary of the present status and future outlook of the Nebraska Blue Shield Plan. It is urged that physicians study the report and give careful consideration to the committee's specific recommendations for the Plan's continued development.

Reports from all sections of the state indicate that physicians are actively promoting Blue Cross and Blue Shield. These are some of the things they are doing to increase public acceptance of these prepayment plans:

1. Recommending membership to their patients.
2. Taking membership for themselves, their families and office staffs.
3. Signing as Participating Physicians and displaying the Blue Shield plaque in their reception rooms.
4. Keeping well informed about the benefits provided by Blue Cross-Blue Shield, and making sure that their secretaries understand these Plans.
5. Having literature and descriptive folders available to patients.
6. Endorsing these plans in advertisements sponsored by county medical societies.

BUY U. S. DEFENSE BONDS

NEBRASKA MEDICAL SERVICE BALANCE SHEET

May 31, 1951

Assets:		
Cash in banks	$197,645.62	
Premiums in process of collection	30,938.60	
U.S. Bonds	384,950.50	
Accrued interest on U.S. Bonds	3,160.21	
TOTAL ASETS		$616,694.93
Liabilities, Reserves and Surplus:		
Accounts payable, Blue Cross	$ 12,496.32	
Accounts payable, monthly invoices	200.39	
Accrued payroll taxes	152.60	
Claims reported but unpaid (pending)	6,599.00	
Unearned premiums	132,067.28	
TOTAL LIABILITIES		$151,515.59
Reserves for:		
Unreported claims	$129,086.15	
Maternity care	179,685.00	
Bonuses	1,450.00	
Collection losses	1,500.00	
Premium tax liability	2,939.19	
TOTAL RESERVES		$314,660.34
Unassigned Surplus		$150,519.00
Total Liabilities, Reserves, Surplus		$616,694.93

STATEMENT OF INCOME AND EXPENSE

May, 1951

	May	5 Months to Date
Income:		
Dues	$153,441.94	$740,744.05
Enrollment fees	1,816.00	6,981.00
Total Earned Income	$155,257.94	$747,725.05
Claim Expense:		
Claims Paid	$131,916.25	$608,341.75
Less:		
Unreported, 4-30-51	121,670.19	128,517.12
Plus:		
Unreported, 5-31-51	129,086.15	129,086.15
Pending, 5-31-51	6,599.00	6,599.00
Claims Incurred	$135,044.21	$613,565.78
Administrative Expense:		
Collection expense	$ 6.50	$ 213.03
Professional — Medical	250.00	1,250.00
Auditing expense	--------	840.00
Advertising—B. S. only	--------	405.73
Printing	93.05	4,542.59
Office supplies	--------	23.25
Postage	--------	134.00
Dues	157.97	771.35
Taxes and licenses	2,939.19*	4,058.55
Payroll taxes	6.25	31.25
Payment to B. C.—		
Regular	12,058.49	59,923.81
Advertising	437.83	4,187.41
Bonus expense	300.00	1,500.00
Conferences and meetings	862.74	2,087.14
Salary — Secretary	416.67	2,083.34
Miscellaneous	50.22	74.22
Total Administrative Expense	$ 17,578.91	$ 82,125.67
Gain or Loss from Underwriting	$ 2,634.82	$ 52,033.60
Miscellaneous Gain or Loss Items:		
Plus—		
Miscellaneous income	$-------	$ 460.25
Interest on U.S. Bonds	83.34	291.68
Less—		
Increase in Maternity Reserve	13,383.00	25,593.30
Net Transfer to Surplus	$—10,664.84	$ 27,192.23
Surplus, 4-30-51 and 12-31-50	$161,183.84	$123,326.77
Surplus, 5-31-51	$150,519.00	$150,519.00

*Includes liability for premium tax of 4 mills for January through May.

CASE REPORT — MAY, 1951

Number of Services Rendered	4,399
Females	2,650
Males	1,749
Subscribers	1,543
Dependents	2,856

ENROLLMENT SUMMARY — MAY, 1951

Groups enrolled during May	37
Groups cancelled during May	17
Number of active groups, June 1, 1951	3,089

	Subscribers	Dependents	Participants
Membership, May 1, 1951	63,532	83,309	151,841
Additions	2,442		
Less Terminations	957		
Plus Reinstatements	14		
Net Gain	1,499		
Membership, June 1, 1951	65,031	90,393	155,424

The Nebraska State Medical Journal

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

Vol. 36 Norfolk, Nebraska, August, 1951 No. 8

EDITORIAL

ORGANIZED MEDICINE HAS A PLAN

> FIRE ON AMA?
>
> Is the Democratic Party opening fire again on the American Medical Association?
>
> The current issue of the Democratic National Committee's newsletter summarizes President Truman's recent medical care speech, delivered at Bethesda, Md.
>
> The article, signed by Democratic National Chairman William M. Boyle, Jr., then declares that the American Medical Association "still refuses to meet the President's challenge to come up with a broad plan to meet the real problem of payment for medical care."

These paragraphs appeared in the Omaha World-Herald, July 8, 1951. Obviously they refer to the statement made by President Truman who declared himself willing to "go along" with the oponents of his plan for compulsory health insurance if they "come up with a better proposal or even one that is almost as good." Such a plan must "enable all Americans to pay for the medical care they need at a time when sky rocketing medical costs are pushing millions of Americans into the medically indigent class."

Is it to be assumed that the Democratic Party which thus far openly at least has declined backing Mr. Truman in his efforts toward medical socialization is now about to give the great Plan its official blessings? Somehow it is difficult to believe that a major political institution founded on the principles of American government and the American system of free enterprise could deliberately embark upon a program which historically proved to be the first mile down the road to socialism followed by economic chaos.

As to the President's challenge for a plan which is "almost as good," the medical profession now has a plan in operation which has already proven far more effective and economical than any governmental program thus far devised. Today the Blue Cross and Blue Shield is providing hospital and medical services to millions of Americans at premiums lower than even the most optimistic bureaucrat can honestly promise through the proposed pay-roll touch. At the same time there is no red tape and buck-passing which invariably characterize governmental formalities and "processings."

We maintain it is high time for those in high places of leadership to cease playing with the credulity of those elements of our population who can be talked into thinking they can obtain good medical care, "for free." It is nonsense and those who make those promises openly or even by implication do so either in ignorance or in dishonesty.

THE SCHOOL HEALTH SERVICE AND THE DOCTOR

It was the privilege of the editor as representative of the Joint Committee on Health appointed by the American Medical Association and the National Education Association, to attend the Annual Convention of the latter Association in San Francisco, July 11-15 of this year. Of obviously special interest to us was the one-day conference on school health services consisting predominantly of school nurses, teachers of physical education and school administrators. The problems under discussion were of a general nature common to all areas of the country.

Of great significance to us was the attitude of these delegates toward the medical profession. Opinions freely expressed indicated a warm relationship between education and medicine on the organizational plane. One was impressed with the existence of mutual understandings between the majority of the school districts and their local medical societies. On the individual level, however, this state of happiness was less in evidence. Criticism though benign and expressed in a spirit of desirability for closer coordination, was general. That these individual problems may be a manifestation of a lack of understanding of the functions and/or the operations of the local school health services in their physician-family relationships was admitted by all participants in the discussion. Indeed conflicts between the individual physician and the individual school nurse or administrator are to be expected regardless of the fact that each in his or her own way is interested in the welfare of the individual pupil. For better or for worse the school administrator, the nurse, and the physician, evaluate the health problem of the individual child from their own professional and personal points of view, and their conclusions must be expected to vary on occasion.

It is not within the scope of an editorial to define in specific terms the role of the individual family physician in the scheme of the school health service. As we see it from a broad horizon the doctor's functions center around the protection of the child insofar as it is possible against the physical and emotional hazards connected with school attendance. To exercise this function effectively he must be broadminded and receptive to the opinions of the school authorities especially where academic factors present the outstanding feature. Educators as a rule accept medical advice on health without challenge to the physician. The least the individual physician can do is to contribute a willingness to recognize problems which the school authorities may present to him.

This editorial is reprinted from the Washington Post, Tuesday, June 26, 1951:

HEALTH INSURANCE

President Truman's offer last week to give up his health insurance program if its critics "will come up with a better proposal—or even one that is almost as good" shows a commendable flexibility in dealing with a controversial subject. The President still believes that compulsory health insurance is sound. But he also realizes that the chances for enactment of any such plan in the near future are remote. His invitation to compromise is not likely to change the drift of events away from the Administration's proposal.

The President recognized the growth of what he called "private health insurance plans" in recent years and said that he welcomed it, although he feels that these plans "do not meet the problem." In our view, the President minimized the gains that have been made on a voluntary basis. When the first compulsory health insurance bill was introduced in Congress in 1939, fewer than 3 million persons were enrolled in the Blue Cross hospital service plan. Today that enrollment is in excess of 40 million. It is especially comforting to know that this includes more than 465,000 residents of the Washington area. To be sure, this movement sponsored by the American Hospital Association and held up to standards fixed by that association, does not offer complete health protection. But it is now supplemented by the Blue Shield plan, sponsored by the medical profession for the prepayment of medical and surgical care, which is also growing rapidly.

Blue Cross is controlled in each city where it operates by a nonprofit organization that is representative of all segments of the community. What it offers in return for fixed monthly payments is not monetary benefits but hospital service. While the achievements of this cooperative plan among the hospitals themselves are especially outstanding, commercial and accident insurance companies have also added many millions of people to the list of those who are taking advantage of the prepayment principle to meet the cost of hospital and medical care. The President says that 75 million Americans have no health insurance at all. Why the negative approach? If this means that the other 75 million do have some protection against the mounting costs of illness, the gain is enormous. While much remains to be done, both by way of extending the coverage of voluntary plans and in many instances enhancing the benefits paid, we suspect that any compromises likely to be considered will have to be built on the foundations already laid.

The Cardiovascular Section of the Nebraska State Medical Association and the Nebraska Heart Association have arranged for a full day's conference devoted to heart disease. In the morning, there will be clinical presentations, a noon day luncheon, and the afternoon will consist of a number of scientific papers. The meeting will be held at the Hotel Cornhusker, Thursday, September 20, starting at 10:00 a.m.

The meeting should be of interest to general practitioners and all others interested in heart disease. All members of the State Medical Association are cordially invited to attend.

ORIGINAL ARTICLES

Diagnosis and Treatment of Primary Carcinoma of the Lip

J. MARSHALL NEELY, M.D.
Lincoln, Nebraska

Primary carcinoma of the lip is one form of cancer which should never be lethal. The lesion is accessible and easily seen. It is so situated that it is noticed early by the patient and should be recognized early by the physician. Despite these facts there are many individuals who die annually in the United States from Primary carcinoma of the lip. There are two reasons for this. The first is the failure on the part of the patient to recognize the seriousness of the lesion. The second is inadequate treatment on the part of the physician who first sees the lesion. One reason for the later factor is the feeling on the part of many physicians that they can differentiate premalignant lesions such as hyperkeratosis and leukoplakia from true carcinoma without the aid of a biopsy. The resulting topical applications or other forms of inadequate treatment only serve to shorten the patients life expectancy. The entire group may therefore be divided into two categories. The first are those lesions which have been inadequately treated by any means. The second group consists of those who have received no treatment. Naturally the second group offers much the better prognosis if properly handled. The entire group may also be divided into those patients who have lymph node metastasis and those who do not. Patients without lymph node metastasis have a much better chance of survival than those with demonstrable lymph node metastasis.

About 16 to 25% of all primary carcinoma of the lower lip arise in premalignant lesions such as hyperkeratosis or leukoplakia. For this reason any such lesions should be regarded as malignant until proven otherwise by a competent pathologist. Since the dividing line between these lesions and true squamous cell carcinoma of the lip is not sharp, therapy may be instituted immediately following the removal of the biopsy. Even though the pathologist may report hyperkeratosis or lepkoplakia the treatment of choice is some form of irradiation therapy. The only difference in the management of these lesions and true carcinoma is the matter of dosage. Since the tissue report is available in from 24 to 48 hours the final tumor dose may be decided on at that time.

Fissures of the lower lip should also be considered malignant until proven otherwise. If small they may be satisfactorily handled by complete excision. If they are large they should be handled much the same as leukoplakia and hyperkeratosis. If the excision has been complete this is usually all the therapy necessary even if the pathologist reports squamous cell carcinoma.

Papillomas of the lower lip are regarded by many as grade I carcinomas and are so treated. Since these are usually well localized and do not infiltreate deeply they are best treated by simple surgical excision. Mucoceles of the lip are usually readily recognized clinically and if bothersome may be excised. Infectious lesions such as granulomata or chancre are easily recognized by their short duration and the early appearance of enlarged regional lymph nodes. Should any doubt exist biopsy should be done.

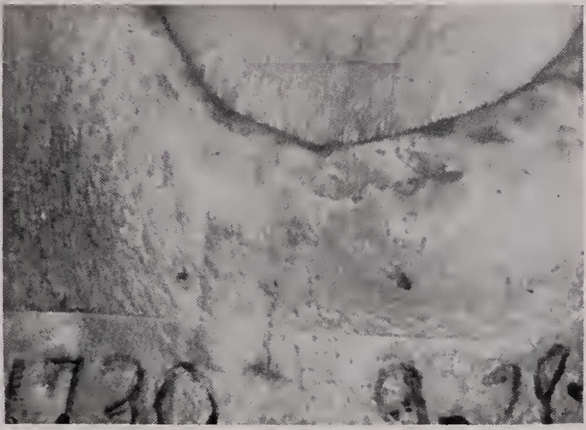

Fig. 1. Well differentiated Squamous Cell Carcinoma of the Lip before treatment. No palpable lymph nodes in submental or submaxillary region.

Another common benign lesion involving the lips is hemangioma. These are usually seen in infants. As a general rule, if not large or bothersome they will regress spontaneously. If large and showing a tendency to bleed easily regression may be hastened somewhat by the administration of about 400r to the lesion. These hemangiomas of the cavernous type are rarely seen in adults though small bluish systic hemangiomas are not infrequent and are usually disregarded. The exact cause of primary carcinoma of the lip is unknown. Perhaps the most important etiological factor is sun and wind. The lesion is much more frequent in individuals who are constantly exposed to these elements.

males over females. Hyperkeratosis, fissures and squamous cell carcinoma of the lip was seen not infrequently in young men on military duty in the South Pacific during the last war. In most instances they were on the type of duty which exposed them constantly to sunshine and wind.

Primarly carcinoma of the lip occurs most frequently in the 6th and 7th decades. In the 80 patients constituting, the basis of this report, including both precancerous lesions and squamous cell carcinoma the following age distribution was noted.

0-10	0
10-20	0
20-30	1
30-40	12
40-50	12
50-60	21
60-70	20
70-80	10
80-90	9

This age distribution follows in general that published by other authors(16, 9, 13).

Primary malignant and premalignant lesions of the lip occur much more frequently in males than in females and are much more frequent on the lower, than the upper lip. Burkell(3) found 98.6% in males and 97% of the lesions in his series were found on the lower lip. 9.1% of his patients were stage I clinically and only 0.5% were stage IV. Ackerman and Regato(1) state that primary carcinoma of the lip makes up 20-30% of all oral cancers and about 2% of all carcinomas.

In nearly all published series of patients with primary carcinoma of the lip a high percentage of the tumors are of low grade malignancy. As Broders(9) pointed out in his original work on the importance of grading neoplasms a good prognosis can be expected in grade I and II tumors and a poor prognosis in grade III and IV. There does not seem to be any direct relationship between the size of the lesion and the histological grade. Large fungating lesions may be found to be very well differentiated and small lesions may rarely be found which are extremely anaplastic. In this series of 80 patients the following distribution was encountered.

SEX AND HISTOLOGICAL TYPE

Total Number of Patients	80
Males	73
Females	7
Hyperkeratosis or Leukoplakia	31
Squamous Cell Carcinoma	45
Grade of Squamous Cell Carcinoma:	
Grade I	6
Grade II	13
Grade III	12
Grade IV	0
Basal Cell Carcinoma	4

Basal cell carcinoma should probably not be included in this study since most, if not all of them, actually arise in the skin adjacent to the lip rather than in the lip proper. In this small series there is also a smaller percentage of grade I carcinoma than is usually reported and this is due in part to the fact that 14 of the tumors were not graded histologically. The premalignant lesions hyperkeratosis and leukoplakia are included in this table because it is felt that they should be handled much the same as grade I squamous cell carcinoma of the lip.

Primary carcinoma of the lip occurs much more frequently on the lower lip than on the upper, and is about equally distributed between the middle and lateral thirds. The following distribution was encountered in this series.

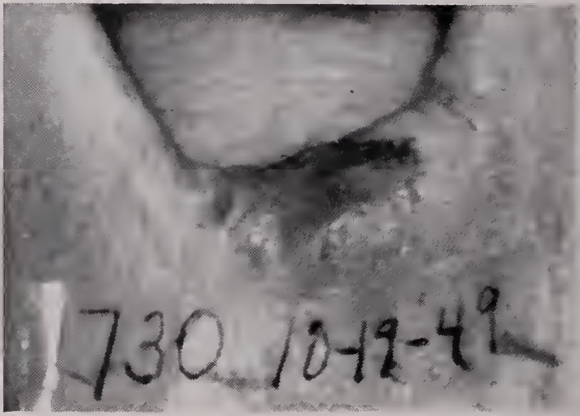

Fig. 2. Appearance of lesion 12 days after completion of x-ray therapy. 6,000r was delivered to the lesion in 6 days. This is about the height of the x-ray reaction.

AREA INVOLVED

Middle third	34
Lateral third	35
Whole lip	4
Upper lip	2
Lower lip two-thirds	5

No significant alteration in prognosis could be found in this series in the matter of the location of the primary lesion though some feel that metastasis is more apt to occur early in those neoplasms which occur in the lateral third near the angle of the mouth.

The duration of the lesion is extremely important in estimating prognosis although occasionally a large fungating carcinoma of the lip which has been present many years may be completely and permanently eradicated. This type of lesion is nearly always of low grade malignancy histologically. In this group of patients the duration of the lesion prior to adequate therapy was as follows:

DURATION OF LESION

1 Year or Less	27
1 to 3 Years	18
17 Years	1
10 Years	1

Both the patient who gave a 17-year history and the one who stated that he had the lesion for 10 years are well after 5 years following adequate therapy. Both of these lesions were also grade I squamous cell carcinoma.

Another factor which materially alters the results of therapy in primary carcinoma of the lip is the matter of previous treatment. Any patient who has received caustic paste, acid or inadequate irradiation has a much poorer chance of complete recovery than one who has had no previous therapy. Fourteen patients in this series had previously had surgery, irradiation, acid or some form of caustic paste.

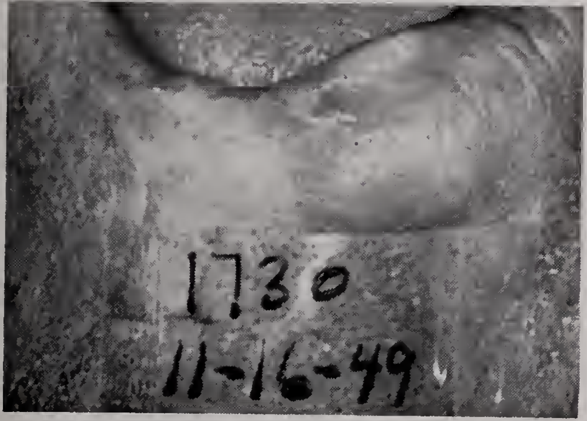

Fig. 3. Appearance of lesion about one month after height of reaction. It appears completely healed except for a small amount of scaling.

There is still a wide variance of opinion regarding the best method of treatment of the primary lesion in carcinoma of the lip. Ward and Henrick(2) studied 259 patients with primary carcinoma of the lip and concluded that surgical excision of the primary lesion gave from 10 to 12% better results than treatment of the primary lesion by some form of irradiation. Del Regato(8) feels that surgery should not be used at all in the management of the primary lesion in carcinoma of the lip except in those individuals who have a very small early lesion 1 cm. or less in diameter. He states that these small lesions can be controlled equally well by either irradiation or surgery. Some large medical centers do not use irradiation at all in the management of carcinoma of the lip but treat the primary lesion by wide sugical excision and the metastatic lymph nodes by radical dissection.

There is also a marked difference of opinion regarding the best method of handling metastatic lymph nodes. Widman (5) uses prophylactic irradiation to the submaxillary and cervical lymph nodes. Judd and Beahr(11) treat the primary lip lesion surgically and use routine prophylactic neck dissection. Howes and LaRosa(13) reported 100 cases in which all but one patient was treated by surgical removal of the primary lesion. They did not treat the cervical lymph nodes by either surgery or irradiation unless there was evidence of involvement in which case a radical resection was done. Pemberton(4) recommends prophylactic lymph node dissection in all cases of primary carcinoma of the lip. Del Regato(8) does not treat the cervical and submaxillary lymph nodes by either surgery or irradiation unless there is definite evidence of metastasis in which case a radical surgical dissection is done.

With so many different methods of handling this lesion it is difficult to decide just what is best for the patient. This is particularly true when one analyzes the results. If one ignores morbidity and cosmetic results there seems to be very little difference in the ultimate prognosis so far as length of life is concerned. Since there is little difference in the results no matter what method of management is used the matter of cosmetic results and morbitity should be carefully considered and allowed to play a part in the decision in the method of handling this neoplasm.

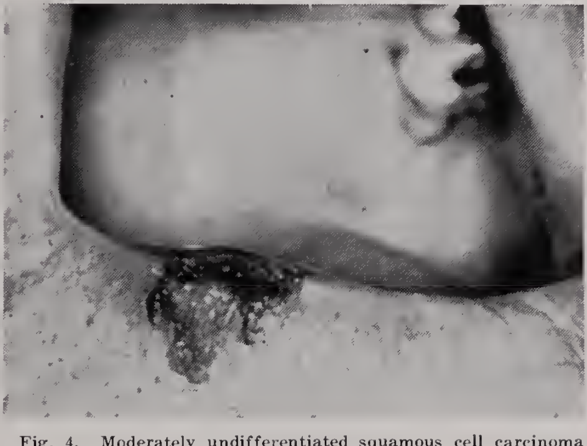

Fig. 4. Moderately undifferentiated squamous cell carcinoma of the lip before treatment. There were no palpable lymph nodes. The lesion had been present for a period of about one year.

For a period of 15 years we have totally abandoned the treatment of the primary lesion in patients with carcinoma of the lip by the surgical method. Regardless of the size of the lesion we prefer to handle the primary

This may partially explain the marked increase in the incidence of this neoplasm in lesion with some form of irradiation therapy, preferably external irradiation, rather than radium. Surgical consultation is requested only when it is certain that metastasis has occurred in the submental or submaxillary lymph nodes at which time surgical dissection is done. If lymph nodes are palable in a patient who has what seems to be a relatively early carcinoma of the lip they are regarded as inflamatory nodes until proven otherwise and carefully observed during the irradiation therapy to the primary lesion. If after a suitable period of time following the completion of therapy to the primary lesion these nodes do not subside and if they remain firm and are enlarging, surgical consultation is requested and a radical resection is done. Since some infection exists in nearly all carcinomas of the lip a high percentage of palpable lymph nodes are inflamatory and will subside once the primary lesion is eradicated. When it is born in mind that, except in high grade carcinoma of the lip lymph node metastases occurs late, this conservative method of manageemnt seems all the more advisable.

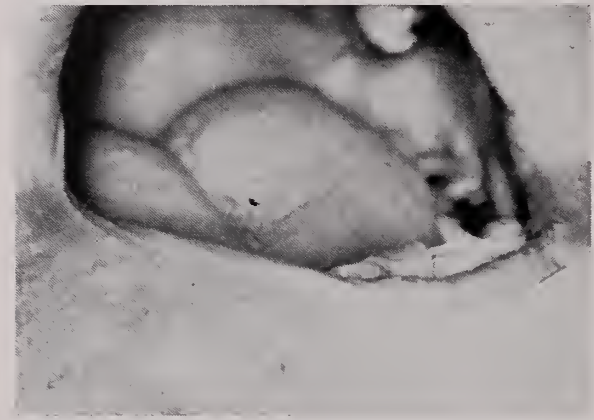
Fig. 5. Same area as shown in illustration No. 4, 6 weeks after the completion of irradiation therapy. 6,000r was delivered within a period of 6 days at the rate of 1,000r per day.

While the primary lesion may be eradicated by either surgery or external irradiation the excellent cosmetic results following irradiation therapy is enough in itself to consider the surgical treatment of this lesion obsolete. If the lesion is not recurrent and if there are no metastases to the regional lymph nodes adequate irradiation therapy will effect complete destruction of the lesion in nearly 100% of patients. If metastases are present the prognosis is bad regardless of the method of therapy used.

There are several satisfactory methods of administering irradiation to the primary lesion. Some prefer the use of radium capsules, some use intersitial radium needles and, if the lesion is superficial some use radium plaques. Sharp, Williams and Pugh(16) used radium capsules in a mold or a radium plaque in the superficial lesions with excellent results. In later years however, they have used single field x-ray therapy with equally good results and state they now prefer this method of treatment to radium in any form.

It is our feeling that while radium application to primary carcinoma of the lip is a perfectly satisfactory method of handling the lesion, equally good results may be obtained with the use of x-ray. This method is much easier to use and is much more satisfactory from the patients viewpoint because it is necessary for him to occupy only a few minutes each day for a few days to complete his treatment. The technical factors used in this method of treatment depend on the extent of the lesion and the thickness of the lesion. For superficial lesions up to ½ cm. in thickness the factors used are 100 Kvp, no filter, and 22 cm. distance. The first treatment is given immediately following the removal of tissue for pathological examination, which is done in all patients. We do not wait for the pathologists report because the first part of the therapy is the same whether the lesion turns out to be hyperkeratosis or carcinoma and final determination of dosage can be made the following day when the pathologists report is available. It is our practice to complete the treatment of the lesion, whether it is hyperkeratosis or carcinoma within a period of six to eight days. If the lesion is superficial this therapy is given at the rate of 1000r per day to a total of 6000 to 7000r if the lesion is found to be carcinoma and about 3000r if it turns out to be one of the premalignant lesions. If the lesion is bulky technical factors are altered to increase the depth dose. In this case commonly used factors are 140 KvP ¼ mm. cu. 1 mm. Al. filter, 22 cm. distance and a total of 6000 to 7000r is still delivered within a period of about six to eight days. In large bulky carcinomas of the lip it may be necessary to increase the depth dose further by using 200 KvP, ½ mm. cu. 1 Al. mm. filter and increased distance to 50 cm. In these rare instances the treatment is necessarily prolonged due to decreased output.

Before instituting any form of irradiation therapy about the mouth it is essential that all dental infection be completely erradicated. This is done in order to prevent the occurance of irradiation osteitis or osteomyelitis which occurs so frequently following irradiation where gross infection exists. After the infection has been taken care of every effort is made during the course of therapy to protect normal tissues from as much irradiation as is possible. The lesion itself is masked off with lead leaving about 1 cm. of normal tissue around the lesion. In addition to this a strip of lead is placed in the mouth behind the lower lip in order to protect the gums.

Once therapy has been completed the patient is instructed to return for re-examination in 10 days which is about the time when the height of the x-ray reaction is expected. He is also told to keep the area treated moist with sterile vasalene when it begins to be sore. During the worst of the reaction we have found that vaselene gauze strips layed over the area treated greatly decreases the amount of discomfort to the patient. No matter how much care is used in this method of treatment an irradiation ulcer will develop in a small percentage of patients. When this happens the lesion is kept moist with vaselene and given a chance to heal for a period of about two to three months. If, at the end of that time, the ulcer still persists it should be totally excised and the entire tissue submitted to the pathologist. In a very high percent of cases the tissue will show only the typical changes of irradiation ulcer and the wound will heal readily by primary intention.

There is still a marked difference of opinion regarding the correct management of cervical lymph nodes in patients with primary carcinoma of the lip. Some still advocate prophylactic dissection and some use irradiation to the cervical area as a prophylactic measure. We do not feel that irradiation therapy has anything to offer in the matter of cervical lymph node metastasis either from a therapeutic or prophylactic standpoint. In either case it would be necessary to deliver a minimum of 6,000 tissue to the entire cervical lymph node area for the treatment to be effective. The morbidity resulting from this form of therapy is out of proportion to the improvement in patients treated by this method. We feel that nothing will be accomplished by doing anything to the cervical lymph nodes until one can prove the presence of metastasis. When cervical metastasis has been proven to exist the treatment of choice is radical surgical dissection.

SUMMARY

1. Primary carcinoma of the lip is one form of cancer which theoretically should be cureable in 100% of cases.

2. Irradiation therapy to the primary lesion is the treatment of choice.

3. In patients who have developed cervical lymph node metastasis the prognosis is bad but the treatment is radical surgical dissection.

4. So-called prophylactic therapy to the cervical lymph nodes either by irradiation therapy or surgery is not indicated.

5. Every lesion appearing on the lip should be considered carcinoma until proven otherwise by biopsy and microscopic study by a competant pathologist.

6. Inadequate treatment is one of the main reasons for continued mortality from primary carcinoma of the lip.

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Management of Carcinoma of the Stomach*

DR. A. C. JOHNSON
Omaha, Nebraska

INTRODUCTION AND REVIEW

Several surgical reviews of the management of carcinoma of the stomach indicate that considerable progress has been made over the past 30 years in establishing higher rates of operability and resection with a corresponding increase in the percentage of probable 5 year cures.

Among males, carcinoma of the stomach accounts for more deaths than any other form of carcinoma; and among women, it runs second to carcinoma of the uterus. It has been estimated that annually about 38,000 persons in the U.S. die of carcinoma of the stomach, and in this group, men are affected three times as frequently as women. The fact that our longevity rates are steadily increasing means that more and more patients will, in the future, fall into the cancer age group with a corresponding increase in the number of gastric carcinomas. In 1860 only 2.7% of the population was over 65 years of age. By 1945 the proportion had risen to 7.2%. Expressed in numbers, the increase is even more startling. In 1860 there were only 860,000 above 65 years of age. In 1945 there were 9,920,000. By 1970, 16,000,000 will have passed the 65 year mark. It has been estimated that by 1960, 40% of the population will be over 40 years of age and that the annual death toll from cancer will be 270,000.

Nebraska should inevitably participate in this increase of carcinoma since recently a national survey places the state at the very top of the list for longevity and healthfulness of its citizens.

Undoubtedly, among the 38,000 annual deaths from carcinoma of the stomach there are a number of deaths which might be preventable by earlier recognition and more prompt treatment of the disease. The surgical treatment of carcinoma of the stomach, as in carcinoma elsewhere, leaves much to be desired. Occurring as it does in an organ of large capacity, an early lesion may remain silent for a considerable period of time. Symptoms are or may be determined largely by the site of the growth, by its extent, and by the degree of motor impairment which it causes. A lesion confined to the parsmedia, at the lesser curvature, or one that lies on the anterior or posterior wall may be silent until well advanced. A tumor near the cardiac or the pyloric orifice may cause marked obstruction before giving any other evidence of its presence. Hemorrhage may be the first sign from a large ulcerating lesion of the fundus, a location where obstruction or motor impairment would occur late. The fact that an early ulcerating carcinoma may mimic a benign lesion is now well established, especially as to symptoms and clinical course at least in the early stages. Medical treatment may cause a temporary healing and regression as shown by fluoroscopic study.

Earlier recognition of carcinoma of the stomach appears to be the key by which better results may be achieved surgically. First in importance is the need for discarding the old textbook description of the disease in advanced stages and the substitution of a classification of the disease in its earlier forms. Reviewing histories of the disease shows that signs and symptoms early in the disease fall into three categories; namely, the typical, the ulcer type, and the non-descript. About one-half of these patients will fall into the so-called typical history. Here a man of middle age suddenly develops gastric symptoms, whereas previously he had always enjoyed perfect gastric digestion. The symptoms may be mild or even vague but nevertheless constant. I recall a young man whose only complaint was belching of gas, constant and disturbing, and never responding to antiacids, antispasmodics, dieting, laxatives, or any form of medication. A routine fluoroscopy showed a large filling defect in the mid-portion of the stomach which, on exploration, was found to be inoperable. The dyspepsia in this group may consist of belching, anorexia, distress or discomfort after meals, nausea, epigastric burning or some other type of indigestion. Later may come vomiting with loss of weight and strength, weakness, anemia, etc.—the late or textbook picture of gastric carcinoma.

One-fourth of the patients present the so-called ulcer type of history when carcinoma is present. Here, symptoms may have been present a short or a long time with an accurate pain-food-ease sequence. At first relief may be obtained by the usual medical controls. Later these measures fail to bring relief. Foods aggravate, rather than relieve the distress, epigastric ache with nausea, vomiting, anorexia supervene with weight loss, etc. Any ulcer patient of long standing, whose symptomatology changes, should arouse suspicion that carcinoma may be present.

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*Read before the Omaha Mid-West Clinical Society, October, 1950.

Approximately one-fourth of the patients who have gastric carcinoma present the nondescript type of history. The symptoms may be vague, indirect, or even absent. The gastric lesion may be so situated that the patient notices only weakness and loss of strength, or, he may state that he had recently had a case of intestinal flu and had never fully recovered, or that he had first noted dark stools but was otherwise in fairly good condition though weak. Unexplained anemia should arouse the same suspicion towards gastric carcinoma as it does in carcinoma of the cecum which has been so much more widely publicized.

Physical examination may develop no significant findings relative to carcinoma, the blood pressure, blood studies, weight, strength, and gastrointestinal findings all normal or nearly so. Later, when the disease is more advanced, examination may reveal a movable or fixed mass in the epigastrium, palpable left supraclavicular lymph node, hard solid metastatic nodules in the cul-de-sac and lateral pelvic walls, and occasionally a metastatic nodule at the umbilicus, as well as the irregular nodular enlargement of the liver. Blood studies for detection of any anemia present or any disturbance of electrolytes through dehydration, as well as gastric analysis, should be carried out. It is well to remember that only one-half of the patients who have gastric carcinoma and who are treated surgically have no free hydrochloric acid present in the gastric contents. About one-fourth have low acid values and the other one-fourth has normal or even elevated gastric acids.

The most important procedure for early recognition of a suspected carcinoma is fluoroscopic barium studies. The roentgenologist will average from 96 to 98% positive diagnoses in the presence of an early or obscure lesion. In a small proportion there may be some difficulty in distinguishing between a benign or malignant lesion. In these cases the gastroscopic examination of the stomach may prove of value.

Recently, Drs. Panico, Papanicolaou, and Cooper have devised an ingenious balloon test for carcinoma of the stomach. A rubber balloon covered with short pieces of braided silk and attached to the end of a tube is swallowed into the patient's stomach, and then inflated. Cells from the stomach lining cling to this balloon brush. The apparatus is deflated, withdrawn, and the cells removed by washing in a special solution. The cells are then examined by means of a smear test developed by Dr. Papanicolaou, and in wide use for detecting carcinoma of the cervix. Among 33 cases examined and the findings confirmed by operation, 17 had malignant disease in which the test was positive in 14 cases, suspicious in 1 case, with no malignant cells found in 2 cases. Of 16 patients with benign lesions, smears were negative for carcinoma in 14, while 2 were falsely read as suggestive of malignancy.

Another test, which may prove to be important, for earlier detection of gastric cancer is the serum antiproteolytic reaction. The test consists of making serial dilutions of serum from 1:60 to 1:150 and testing the inhibition of digestion of a known amount of fibrinogen by a known amount of trypsin by these serum dilutions. A value less than 113% is negative, from 113 to 137% is doubtful, and higher than 137% is rated a positive reaction. The antiproleolytic reaction of the serum is increased in a high percentage of patients with carcinoma of the stomach while it is rarely elevated in benign lesions of the stomach or duodenum except in the presence of gross hemorrhage or perforation, according to Clifton and Young. The action may be of value as a screening mechanism for carcinoma and helpful in reaching a diagnosis of gastroduodenal lesions.

Another noteworthy development for doing a mass production job of screening large numbers of stomachs for early detection of cancer is the method of photofluorography, made possible by some Danish adaptations of the Schmidt camera. By this method a rapid screening could be conducted as carried out now by mobile unit chest surveys. The incidence of carcinoma of the stomach is about 1 case in 600 to 900 people, while in tuberculosis of the lungs the occurrence is 1 to 300 to 500 surveyed.

INDICATION FOR TREATMENT

Operation for carcinoma of the stomach is performed for the purpose of effecting a cure or of prolonging life by palliation. Either of these results may be achieved in many individual cases by careful examination and se-

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SLIDE

UNIVERSITY OF MINNESOTA	ST. JOSEPH'S HOSPITAL, OMAHA, NEBR.
NUMBER OF CASES 486	NUMBER OF CASES 100
AVERAGE AGE 63.2	Male 62.6 Female 63.1
AGE RANGE:	Male 42 to 85 Female 37 to 82
SEX: Male 69.1% 432 Female 30.9% 154	Male 65.0% Female 35.0%
OCCUPATION:	MALE (65): Laborers 24.0% Farmers 23.0% White Collar 22.0% None (Clinic—retired) 17.0% R.R. 14.0% FEMALE (35): Housewife 80.0% Office 3.0% None 17.0%
FIRST SYMPTOMS:	1. Fatigue 2. Weight loss 3. Nausea and vomiting 4. Belching 5. Epigastric pain 6. Constipation 7. Diarrhea 8. Difficulty in swallowing 9. Anorexia 10. Gastric distress
TIME FROM ONSET TO PRESENT:	TIME RANGE: 1 week to 8 years AVERAGE TIME RANGE: 16.9 months or 1 year, 4 months
X-RAY DIAGNOSIS:	NO X-RAY AT HOSPITAL (38): HAD X-RAY AT HOSPITAL (62): Neoplasm 54 87.0% Benign 6 10.0% Unsatisfactory 2 3.0%
OPERATION (447 CASES): Operability rate of 76.3% Partial gastrectomy 276) Total gastrectomy 31) 52.2% Exploratory 85 14.5% Gastrojejunostomies 25 4.3% Enterostomes 30 5.1%	(Operability Rate of 76%) Partial gastrectomy 37 48.7% Total gastrectomy 2 2.6% Exploratory 28 36.8% Gastrotomy 9 11.9% None 24 24.0%
MORTALITY (51 DEATHS or 16.6%): Partial gastrectomy 15.2% Total gastrectomy 30.0% Exploration (85) 8.2% Gastrojejunostomy (25) 24.0% Enterostomes (30) 13.4%	TOTAL DEATHS (26): 24 cases not operated— 9 died 41.0% 28 cases, explored and inoperable— 4 died 14.0% 48 cases operated— 13 died 27.0%
CAUSE OF DEATH: (Operated Cases 45) Peritonitis 28 Atelectasis 8 Cardiac failure 4 Renal complications 3 Pulmonary embolus 2	(Operated Cases 13) Pneumonia 2 Embolus 2 Peritonitis 3 Day of surgery 1 Heart failure 1 Gradual decline 4
METASTASES: Partial gastrectomy and Total gastrectomy 65.0%	PARTIAL GASTRECTOMY (37): Metastases (25) 67.0% No metastases (12) 33.0%
SURVIVAL: Gastric resection (3 yr.) 29.4% Gastric resection (5 yr.) 21.5%	Not determined

lection. Before operation is undertaken, the possibility of distant metastases to the supraclavicular node of Virchow; to implants on the pelvic peritoneum (detected by rectal digital examination); to the lung parenchyma; to the liver and umbilicus must first be determined by physical examination and x-ray screening. Formerly, the presence of a large fixed epigastric mass was considered sufficient evidence of the presence of an inoperable lesion. Today, many of these are amenable to resection procedures, and in case no metastatic evidence is found elsewhere, exploration is justifiable. The roentgenologist often ventures an opinion as to the operability of the lesion under his observation, and while he is often right in his opinion, it has been shown that he may be in error as high as 20% when all other factors determining operability are favorable.

Pain, where severe, indicates extra gastric involvement from penetration or perforation and is, therefore, an unfavorable sign. When operation is advised and accepted, the patient should be hospitalized for correction by transfusion of any deficiency of blood, protein or electrolyte balance. Gastric lavage for correction of retention is accomplished by an indwelling Levin's tube plus suction. Congestion of the gastric walls will be reduced, and the tissue condition improved so that a safer suture line is possible. Provision should be made for possible transfusion of at least 2 pints of matched blood at the time of operation.

Operability rates have increased markedly in the past 25 years, a fact consistent with the general progress made in the surgical care of carcinoma. A rate of 50% was considered daring 25 years ago, while in the same clinics today, a rate as high as 75% to 88% has been reported. Likewise, the rates for resection have gone from 28% to 80%. The indication is clear that cases formerly considered doubtfully operable or inoperable are today being submitted to surgery. The mortality rates have participated also in this improved showing, one clinic reporting a mortality rate of 25% for resection in 1936 and but 4.9% in 1945.

In order to determine the status of treatment of carcinoma of the stomach in Omaha as compared with that in other communities it has seemed advisable to review the last 100 case histories taken from the files of St. Joseph's Hospital.

Comparison is made on this slide with the figures from the University of Minnesota in a paper by Dr. David State in 1948. The figures in each case extended over a period of 10 years. It is recognized that by comparison the large number of cases, 586, reviewed by Dr. State, comprises a much more trustworthy and accurate review than the 100 cases at my disposal. However, there are quite a few striking smilarities in the two groups of figures.

SLIDE

Onset Earliest Symptom, One Year or Less in 100 Cases:

1 yr.	9 mo.	6-mo.	3 mo.	2 mo.	1 mo.
16	7	15	17	14	7

Total----76

Onset Earliest Symptom, 3 Months or Less in 100 Cases:

3 mo.	2 mo.	1 mo.
17	14	7

Total----38

Longest Time Onset of Symptoms, 30 Years:
X-ray Diagnosis--------Chronic gastritis with polyposis
Operative Findings-----Carcinomatous gastric polyp

Shortest Time Onset of Symptoms, 1 Week:
X-ray Diagnosis--------Not done
Operative Findings------Inoperable prepyloric carcinoma with liver metastases

DISCUSSION

QUESTION: Is it worthwhile to perform gastroenterostomy or enterostomy in the face of an inoperable lesion?

ANSWER: In general, only a minimal amount of palliation will result from this type of procedure. Dr. State in his figures shows the average survival following gastro-enterostomy was only 5.4 months, and that following enterostomy for feeding purposes, only 3.5 months. On the other hand, palliative resection, even though cure was precluded by extension of the disease, resulted in a palliation of 22.4 months with liver metastases and an average of approximately 15 months. It is a well known fact that removal of all, or a major portion of a carcinoma, results immediately in a progressive improvement of the patient's general condition. On the other hand, very temporary beneficial change results when the lesion is left in situ and the obstruction is relieved by gastroenterostomy. Even with a gastroenterostomy stoma, little actual relief may be obtained since the motility of the stomach is so interferred with that proper and prompt emptying does not take place sufficiently to give the desired relief. Emptying the stomach by means of tube may give as much help. On the other hand, the mortality rates for lesser procedures are as high as for resection.

QUESTION: Which is preferable — partial or total resection?

ANSWER: With better preparation and more skillful surgery, the time may come when total removal of the stomach may be the procedure of choice. At the present time, the mortality, while gradually decreasing, is yet too high for general application of this operation except when dealing with high lesions in the cardiac portion of the stomach. In the mid-portion of the stomach also greater use of the procedure should be made since, with the proper exposure, a high-up anastomosis may be easier to perform between the oesophagus and the jejunum with a single row of silk sutures than is a wide Polya type of anastomosis between the cut-off cardiac pouch and the jejunum. Use of the new combined thoraco-abdominal incision has provided greater facility in the exposure of the cardiac end of the stomach bringing many lesions hitherto inoperable into an operable class.

QUESTION: How does the microscopic grade of the lesion influence the prognosis?

ANSWER: This is one of the two most significant factors in the prognosis of carcinoma of the stomach. According to Pack and McNees in their series of 5 year cured cases, Grade I carcinoma had a 100% recovery rate, Grade II dropped down to 41.7%, Grade III was 30%, and Grade IV but 16.7%. Since approximately 2 out of every 3 carcinomas are high grade, there remains but 20 to 30% of all cases in Grade I and II where the survival rate is so much more favorable. Another factor dependent on the grade of the lesion is lymph node involvement. Cases resected without lymph node involvement showed a survival rate of 43.1%, while with involvement, the survival rate was only 16.5%.

QUESTION: What is meant by advanced gastric carcinoma?

ANSWER: My feeling is that practically all the carcinoma of the stomach we see may be or can be classified as advanced. When you consider that about three-fourths of these lesions are graded microscopically as Grade III and Grade IV, the very early spread of the virulent growth of these lesions produce very early metastatic components which immediately takes the lesion out of the early class. At the University of Minnesota metastases to the regional lymph nodes or extension to other organs was found in 65% of all the cases resected. In our own smaller group, 67% of those undergoing partial gastrectomy had metastases and one of two of the total gastrectomies, or 50%. It is obvious that the final percentage of advanced cases, therefore, is much higher when the metastases of the inoperable group are included.

The gastric carcinoma, which often may be classed as early, are usually:

1. Carcinoma engrafted on a chronic gastric ulcer. Probably not more than 5% of gastric ulcers become malignant when smaller than 1½ to 2 cm. When they are 2.5 cm. and up, probably 20 to 30% will undergo malignant change over a period of time.

2. Malignant gastric polyps may often be early with no tendency for early metastatic spread. Many competent observers believe the benign gastric polyps are definitely precancerous.

QUESTION: What accounts for the late recognition of gastric carcinoma?

ANSWER: Several factors make diagnosis of this gastric lesion difficult. Great stress is placed on the early recognition of carcinoma in all teachings to the lay and medical public, and yet several almost insurmountable obstacles to early diagnosis may be present in any given case. First is that of the growth location. Obviously, a lesion developing in the huge mobile cardiac end of the stomach might attain great size and develop numerous metastatic components before dysphagia or pain call the patient's attention to his stomach. On the other hand, we expect earlier symptoms to develop when the pre-pyloric area is involved in an obstructing process which may be small in comparison. In other words, the size of the lesion may have no direct relationship between the duration or type of symptoms produced.

A second factor involves the patient himself. For obvious reasons, he may consider any symptoms that may develop as trivial or unimportant and fail to seek medical advice at a time when operation offers the greatest hope. Likewise, he may resort to home remedies, patent cures, and the advice of friends and relatives for relief, or he lets it go for financial or economic reasons.

There has been a tremendous awakening among the women on the inherent possibility of cancer in every lump or mass discovered in the breast, and no longer is there need for argumentative assurance for biopsy in any suspected lesion. The American woman today is well enough informed that failure to suggest biopsy and microscopic analysis of the tumor invites her to seek a colleague who does suggest this procedure. Likewise, it is to be hoped that further education, especially of the men, will bring earlier recognition and higher rates of resectability in cancer of the stomach.

Another factor of the greatest importance to us as physicians involves the course we pursue in dealing with cancer of the stomach. One early indication may be achlorhydria or hypochlorhydria, since Hebbel and Gaviser show that 75% of their patients with gastric cancer have achlorhydria, and an additional 18% are hypochlorhydric after histamine stimulation. Whatever the degree of acid in the gastric contents may be, additional information must be elicited, since carcinoma may exist in the presence of normal or hypernormal values. Second, we lean heavily on our x-ray colleagues for the final word, and upon them falls the heavy responsibility of recognizing the lesion. Fortunately for us all, the high degree of accuracy attained by gastric fluoroscopy approaches 96 or 97% of positive diagnoses.

Among the pitfalls is the differentiation between early carcinoma of the stomach and a benign gastric ulcer. Many small ulcerating gastric carcinomas may present the clinical picture of a benign ulcer, and the roentgenologist may be uncertain as to the exact status of the lesion. Under these circumstances, it is necessary to establish a well regulated medical regime with frequent x-ray examination. If the lesion fails to completely heal in a reasonable length of time, exploration is advisable. Just the other day one of our x-ray friends, whose opinion is highly valued by all of us in Omaha, made the statement that all gastric ulcers, in his opinion, were malignant until proven otherwise. This statement verifies and supports our own opinion that the treatment of gastric ulcer should be largely surgical.

Occasionally a diagnosis of duodenal ulcer may be made by the x-ray man in the presence of a gastric carcinoma when the lesion is obstructing and it is difficult to differentiate between a pre- or post-pyloric position of the lesion. Fortunately, this is rare. With good roads and new automobiles the American citizen needs only an excuse to go down town or travel long distances. It seems to me that gastric analysis and gastric fluoroscopy should be advised routinely for the man or woman who is troubled with recent or suggestive symptoms, regardless of the distance he may have to travel for such an examination. This is our responsibility, and we should be satisfied with nothing less.

QUESTION: Is x-ray therapy of value in inoperable carcinoma of the stomach?

ANSWER: The value of deep x-ray as a palliation for an inoperable growth is questionable because of the indifferent results following such treatment. Recovery from any radiation sickness produced may be slow and may add to the general debility of the disease. The relief of pain from osseous metastases obtained by x-ray therapy is gratifying and is sufficient recommendation for the method.

QUESTION: How many recurrences take place in the gastric stump?

ANSWER: DeAmesti reviewing 100 cases of subtotal resection found that 40 cases showed signs of recurrence. The recurrence in about one-half of the cases was in the gastric stump, and the carcinoma had infiltrated intramurally 3 - 4 cm. beyond palpable evidence of tumor. For this reason, before an anastomosis is done, tissue at the suture line is examined microscopically for evidence of intramural infiltration. Such a procedure is extremely valuable in preventing the production of an anastomatic stoma in an area of microscopic carcinoma and should, with wider use, make higher resections and more total resections imperative.

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Organic Disorders of the Colon*

As Seen by the Radiologist

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Radiographic and fluoroscopic examination of the colon has become an almost routine examination when abdominal symptoms are presented. Changes in the lumen of the colon, produced by organic disorders, can be demonstrated by introduction of opaqu media by means of an enema or by oral administration of a barium mixture several hours previous to the examination. It is desirable, when possible, to have the patient prepared by thorough preliminary cleansing of the colon. If there is no clinical contraindication, administration of castor oil the night before and a thorough cleansing enema in the morning, prior to the barium enema, is an excellent procedure. In this manner, excess gas and fecal masses are eliminated.

The barium enema is best done under fluoroscopic control, watching the progress of the filling and using direct palpation over the various segments as they fill. The patient is rotated to left and right, as required, to bring out overlapping loops of colon, particularly in the sigmoid area and at the flexures. Palpation also determines mobility and areas of tenderness.

Additional information may often be obtained by injection of air into the colon after evacuation of the barium enema. Enough barium will be retained in the folds of the mucosa so that the air inflation will sharply outline the lumen of the colon. This method is particularly useful in searching for polyps. A simple post-evacuation film is also valuable and will often reveal additional information. Examination by oral administration is most valuable for noting progress of the meal and serial films at hourly intervals are particularly useful for small bowel studies. This discussion will be limited to the most common lesions of the colon.

Polyposis of the colon, although generally considered benign, is now looked on by most clinicians as precancerous. The polyp arises from the submucous fibrous tissue and is covered by a layer of epithelial cells continuous with the mucous membrane of the colon. Polyps may be very numerous and extend throughout the entire length of the colon or, there may be just a few or even a single polyp. In view of the fact that early malignant changes in a polyp may be detected only by microscopic examination, it is important that the polyp or polyps be removed surgically. It has been established that this disease shows a familial predisposition.

Discovery of small, single, isolated polyps is difficult when out of reach of the proctoscope. They are easily obscured by the barium mixture and for this reason the air contrast method is most valuable. When visible in the barium-filled colon, they appear as rounded translucent areas. It is easy to confuse remnants of feces or small gas bubbles with actual polyp defects and it is often necessary to repeat the examination after another thorough cleansing of the colon. The air contrast will aid in showing the rounded small tumor with a small amount of barium adhering to its periphery in sharp contrast to the surrounding air. It is impossible to tell, by the roentgen examination, whether or not the polyps are benign or are undergoing malignant changes.

Malignant lesions of the colon are usually either scirrhous carcinoma or adenocarcinoma. Both types occur most commonly in the distal colon which is fortunately the area most easily examined and is often within reach of the sigmoidoscope. Sarcoma does occur but is usually indistinguishable by roentgen examination. The scirrhous carcinoma is an infiltrating type and produces an annular narrowing defect which eventually causes obstruction. The adenocarcinoma protrudes into the lumen of the colon in a cauliflower-like mass and is likely to be accompanied by sloughing and ulceration and consequent bleeding and anemia. There are also mixed types of tumors of various gradations.

Roentgen examination by fluoroscope and films is used as described previously, using manual palpation by the glove protected hand and rotation of the patient to oblique positions to bring out clearly the overlapping loops. If an obstructing lesion is found no attempt should be made to force the barium beyond it, either by increased pressure of the flow or by rough palpation. There is danger of forcing a perforation of the weakened bowel wall. Administration of oral barium meal in suspected tumor of the colon is objectional, due to possibility of causing obstruction.

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*Read before the Omaha Mid-West Clinical Society, October, 1950.

The defects produced by the tumor varies with the extent and type of carcinoma. With advanced annular type an abrupt change in width of the lumen is noted and may show a very thin flow or even complete obstruction to the enema. Less advanced tumors will show constant narrowing and usually an irregular contour of the narrowed channel. Early changes in the infiltration may produce some stiffening in the wall but this will not often be demonstrable and the process not detected until it produces definite persistent irregularity in contour. Adenomatous carcinoma produces an irregular translucent appearance but also invades the walls and differentiating between the types is often difficult. Both types may be identified by changes in mucosal markings, sharp change in the width of the bowel lumen, and a rather short area of involvement.

Ulcerative colitis, as the name implies, is an inflammatory process involving the mucosa with formation of multiple ulcers. The suspected patient should not be subjected to catharsis or preliminary cleansing enema. The diarrhoea, accompanying the disease, usually empties the colon and further irritation is undesirable. There is also some danger of perforation. The colon should be filled with the barium enema very slowly, avoiding overdistention. Air contrast study is avoided in the acute stages but may be used in the chronic stage. Changes are produced in mucosal pattern with absence of normal haustral markings in various segments or the entire colon. Later the ulcerations become obvious as irregular defects in the mucosa varying from a feathery outline to rather large ulcerative patches, formed by joining of numerous small ulcers. As the disease progresses with formation of scar tissue, the colon contracts in length and the lumen narrows and becomes rigid. When this occurs, the colon fills very rapidly and the patient is often unable to retain the fluid.

Amebic dysentery is also an inflammatory process, producing changes in mucosal pattern which, in advanced cases, may not be differentiated from idiopathic ulcerative colitis. One feature, the early primary involvement of the cecum, is very suggestive. Another finding, which has been observed and reported recently, is a fine sawtooth or feathery marking noted at the periphery of haustral folds. With this fine irregularity is noted a squaring or flattening of the fold. These may often be found when there is no other radiographic evidence of amebic involvement. Very close attention to fine detail is necessary, or the lesion may be missed entirely.

Diverticula of the colon are small pouches extended outward from the lumen and lined with mucosa continuous with the mucous membrane of the bowel. The most common site is the sigmoid but the entire colon may be involved. Roentgen diagnosis is not difficult and diverticula are often an incidental finding with no symptoms to indicate their presence. Diverticula may easily be missed on fluoroscopic examination and even on the radiograph of the filled colon. A film taken after evacuation of the bulk of the enema will bring the defects into sharp relief as the small pouches retain the barium, and form grapelike shadows. Films taken at 24 and 48 hours and longer may still show barium filled diverticula.

The term "diverticulosis" is applied when the diverticula are found with no spasm or associated tenderness is present. Conversely, when found with these symptoms, the term "diverticulitis" is used.

Diverticula have not been considered as precancerous, but the masking of coincidental malignancy by spasm of diverticulitis does occur and the possibility must always be considered.

SUMMARY

This discussion has been limited to the most common organic disorders of the colon as observed by roentgen examination. Etiology, clinical and laboratory findings have purposely been omitted, as they are discussed by respective sections of the symposium.

VA AUTHORIZES CONSTRUCTION OF FIVE 'BOMB-PROOF' HOSPITALS

Veterans Administration plans to accept bids late this year on the first of five hospitals with "bomb-proof" cores which designers hope would protect patients from atomic attack. First to be built is in Washington, D.C. Bids on others in San Francisco, Los Angeles and Cleveland will be received next year. Fifth hospital, also at Cleveland, may be started in late 1953 or early 1954. Two 500-bed general medical and surgical hospitals at Washington and Cleveland are being designed with 12-inch reinforced concrete walls and roofs in a windowless, air conditioned section large enough to house patients and vital equipment. Remaining three 1,000-bed neuro-psychiatric hospitals will have similar cores plus reinforced underground corridors to house patients from nearby buildings.

Organic Lesions of the Colon*

As Revealed by the Laboratory

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Laboratory tests may be of very considerable help in studying organic lesions of the colon — the greatest help, of course is in specifically identifying the agents causing disorders, but these tests may also be useful in ruling out possible causes of the disorder, and a lack of finding of specific disease is occasionally helpful in identifying functional disorders.

The first test, a rather simple one, should be performed in all cases. This is the test for blood which may be done by the long-established benzidine or guaiac technics. More recently, prepared tablets have become available which are convenient and not unduly expensive, and have about the same order of sensitivity as the older benzidine and guaiac tests. The test for blood is, of course, not specific for any particular lesion in the colon, but may be positive from blood in ingested food or the blood may enter from the nasopharynx. These origins can be determined if the possibility is kept in mind. If these are excluded, a positive test means that there is an ulcerating lesion somewhere along the course of G. I. tract. This obviously may be in the esophagus, stomach, small bowel or colon; but if extraneous origin can be ruled out, it calls for very close attention to discover the ulcerating lesion.

With disorders of the diarrheal or dysenteric type consideration must be given to identification of the Shigella, Typhoid, and Salmonella group of bacteria. This is best done by culture of the stool. The culture should be made on fresh stools since these organisms are not as hardy as many others found in stool and optimal conditions should be maintained for their growth by use of proper culture medium, fresh cultures, and if necessary repeated cultures. It is only with the typhoid groups of organisms that blood culture may be at all helpful. The Shigella and Salmonella groups are rarely found in the blood stream. The specific identification of these organisms may require differential media and particularly differential sera. The Salmonella group in particular has now grown to some 150 types of organisms, as a result of extensive study of food contamination during the last war. Other organisms that are significant may occasionally be found and recently there has been some little attention to sensitization of the body to organisms growing in the gastrointestinal tract. If these organisms can be destroyed the patient is very much improved. It is important to first identify the organism; and second to determine which of the numerous antibiotics available is going to be most effective in management. For this purpose there are now available small tablets containing known amounts of the antibiotics to be used in determining the sensitivity of the organisms. This is done by making a plate culture and placing the small tablets on the surface. The zone of inhibition of growth then is proportional to their susceptibility of control by the antibiotics.

Several of these infections also give rise to agglutinin titre in the blood. The agglutinin titre rises usually about the 2nd or 3rd week of the infection, and a rising titre on repeated examinations is much more significant that a single observation. This is particularly true since many men have been immunized in the armed services making it almost necessary to depend on a rising titre.

Another group of diarrheas are concerned with disturbances in fat utilization; namely, sprue, which is rarely seen here, and non-tropical sprue which, while not common, is occasionally encountered, and pancreatic deficiency. There are technics for determining the type and quantity of fat which may be very helpful in identifying these disorders. There are also technics for identifying the enzymes of pancreatic origin contained in the stool. Their quantity and type may be most useful in recognizing pancreatic deficiency.

Infections with fungi, particularly actinomyces and blastomyces, may be recognized either by identifying the characteristic organisms in the feces or better still, by culture which will permit their more specific identification.

In the examination of the stool proper, there are a couple of points which may be helpful. The bacterial infections in general give a stool containing considerable numbers of inflammatory cells, sometimes almost purulent in character, and the amount of blood is relatively slight. On the other hand, the amoebic infections usually give rise to a considerable amount of mucus with modest amounts of blood. In either of these the blood is usually microscopic in amount.

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*Read before the Omaha Mid-West Clinical Society, October, 1950.

There are several infections of protozoal type which require examination of the stool proper for identification. The most common is amoebic dysentery. In the diarrheal phase the motile organisms are found on examination of strictly fresh stool. It is possible also to make smear preparations which, when appropriately stained, will show the organisms in their characteristic form. The ingestion of red blood cells by the organisms is an extremely important differential point. This will help to distinguish them from the non-pathogenic Endamoeba coli and it will also avoid confusion with large phagocytic cells which commonly contain a variety of debris and may cause some confusion particularly if one is not accustomed to examining stools very frequently. After the infection has been established for some time, and particularly if the diarrheal phase is not prominent, one may look for cysts. There are small round bodies on the order of twice the diameter of white blood cells with a sharp but thin cell membrane. The numbers of nuclei are the most important point in differentiating the pathogenic from the non-pathogenic forms. Again, staining procedures may help in making the identification. Infections with Balantidium coli are very uncommon which is a bit puzzling, since this organism which inhabits the intestinal tract of hogs is extremely common through this whole area. These very large motile organisms are so characteristic that if their presence is considered they can scarcely be overlooked.

The flagellates have been a source of considerable discussion with most people feeling that they are non-pathogenic. We are speaking here of organisms like the Trichomonas and Chilomastix. There seem to be occasional well established cases in which these organisms have caused diarrheal disturbance.

Carcinoma of the colon requires biopsy for confirmation. I should like to emphasize a point mentioned in the other papers, that very many of these carcinomas are within reach of the examining finger and more are within reach of the proctoscope. Actually the figures show about 50% of all of the carcinomas of the colon can be reached by the examining finger; while the proctoscope will disclose another 25% so that three-fourths of all of the carcinomas of colon are within reach, so to speak, of the physician with these readily available diagnostic aids. It is important to begin early therapy in carcinoma of colon, as it is with carcinoma on any other part of the body.

In summary, the laboratory may offer definite and specific aid in the diagnosis of many of the disorders of the colon. I should ask particularly that you take the laboratory into your confidence concerning your suspicions or problems in working one of these diagnostic situations. It is necessary, of course, to use the proper methods, proper culture media and have the proper material to examine, to offer the most help and if the laboratory has some idea of what is under consideration, it can offer faster and more definite information for you.

Functional Disorders of the Colon and Their Management*

From the Viewpoint of the Psychiatrist

R. S. WIGTON, M.D.
Omaha, Nebraska

Functional disorders of the colon are very common and are frequently difficult to evaluate and treat successfully. They may range from transient disturbances which everyone sometime has experienced, to prolonged and disabling conditions callenging our best medical efforts. The term "functional" is used rather loosely. To clarify its use here, let us say that any disturbance of function of the colon is a functional disorder. However, this would include the disturbances in motility, secretion, etc., in inflammation or neoplasm, due to local reflexes. Also, irregularities in function may be secondary to structural disease in other parts of the body.

Another type of functional disturbance is due to irregularities of innervation arising in the central nervous system. Even these may be due to organic disease such as encephalitis, etc. For the purposes of this discussion, we will consider only functional disorders of the colon due to central nervous system influences resulting from disturbances in the adaptive responses of the person as a whole; that is, emotional disturbances.

Anatomically, the basis for the influence of the higher centers on the function of the colon is clearly demonstrable. Connections exist between the cortex and the thalamus, the hypothalamic region, and the autonomic centers. The chief question is, how do emotional reactions or "reflexes" become disturbed in such a way that the energy of these emotional tensions is carried by the autonomic nervous system to the colon, thus disturbing its function?

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*Read before the Omaha Mid-West Clinical Society, October, 1950.

TYPES OF COLON DISTURBANCES RELATED TO CENTRAL ADAPTIVE RESPONSES

In psychiatric practice, notable disturbance in colon functions occur, for example, in endogenous depressions. In other cases, considered primarily of emotional or "psychiatric" nature (psychoneuroses, etc.), symptoms of colon dysfunction are not uncommon. Frequently, such a case will have had a period in the history of the development of his illness when colon symptomatology was uppermost, or seemed to stand as the major complaint.

In other cases, evidences of general nervous disorder are much less, or seem to be lacking entirely. The occurence of functional disturbances of the colon in so-called "non-neurotic" persons seems at first to be unexpected. However, persons in whom emotional tensions do not find outlet in "neurotic" reaction patterns are more apt to have this energy diverted to autonomic functions, producing irregularities in organ functioning.

Colon disturbances related to complex emotional tensions are usually described by their chief organic symptomatology, as mucous colitis, spastic colon, irritable colon, or just "colitis."

Sometime ago ulcerative colitis might not have been included here. My attitude has been influenced to a great extent by internists and general practitioners who have been convinced of the emotional disturbances which are a causal factor in many of these cases.

MECHANISM OF DISTURBANCE THROUGH AUTONOMIC CENTERS

How do emotional responses become disturbed in such a way as to influence colon function? We recognize normal visceral reactions to acute emotional states. Some emotional reactions can be hidden in the sense that the patient and others are not aware of their presence. Being "unconscious," they are not resolved. They continue to cause disturbance, and thereby can be the source of chronic reactions.

Colon disturbances can be associated with emotional problems of many varieties, and a general discussion of such disorders is not possible here. Some aspects relating to the present subject can be mentioned.

In animals the function of the colon is chiefly to discharge from the body the undigested portions of the food and other metabolic side products that are eliminated through the intestinal tract. In the human animal, however, the colon becomes associated early in life, not so much consciously, but in a more or less conditioned reflex fashion, with aspects of living which are tremendously important, but which originally would not be related to colonic functioning. We need only to remind ourselves of the various psychological aspects of toilet training, the difficulties of the infant in learning socialized man's attitude toward his excretions, the symbols that it provides in his language, and the way the child uses his colon for other purposes than the elimination of waste products. The colon is not alone among the tissues of the body that gain this secondary relationship to emotions and problems of adaptation. For example, the skin of the face, which biologically and in most animals would have no particular function related to emotions, is very responsive in mankind to different types of emotional experience.

Pediatric and psychiatric studies have shown that functions of the colon become secondarily associated with certain adaptive responses of complex and basic nature. Particularly during the toilet training period are conditioned responses made in relation to primitive concepts of approval or disapproval, cooperation and rebellion, warm or hostile reactions.

The functions can be utilized in effective, though unacceptable ways. Ask any mother, (whose baby, having just been fruitlessly on the potty, then toddles to the living room rug to perform), whether this is a matter of emotions.

These physiological relationships are naturally complex and add to the difficulties of studying such reactions. We are dealing with basic biological reflexes, more complex than ordinary conditioned reflexes, more primitive than the workings of the mind, but capable of reacting in complex ways to basic emotionally charged life situations.

This type of "unconscious" phenomenon is difficult to deal with and seems sometimes to be "unreasonable." But when we consider that all of the other tissues in the body have many functions of which we are unaware, why should not the nervous system in its complexity have a great many automatic or unaware functions? As a matter of fact, we know of many unaware functions of the nervous system, and in a certain sense, attempts to understand so-called psychiatric difficulties of people is merely a further attempt to understand some of the more complex unaware reactions of which the nervous system is capable. Certainly if colonic disturbances associated with personality or emotional upsets were even close to what we call conscious thinking, there would be no need for psychiatry, for then these disturbances would be all resolved by the "mind" (an opinion still held by some people).

A good deal happens between infancy and adult life and a great complexity arises around emotional reactions, especially when we are considering those of which we are not aware. However, physicians have not been stopped just because a problem is complex. When an opportunity is provided to make a detailed study, using techniques which have been developed in relatively recent years, the relationship between certain basic life adjustment problems and autonomic disturbances reflecting themselves in colonic symptoms, becomes not only much clearer but also more precise.

SOME GENERAL PRINCIPLES IN THE MANAGEMENT OF FUNCTIONAL DISTURBANCES OF THE COLON

Ideally, treatment should derive from a knowledge of the nature and cause of the disorder. Since the colon dysfunction is symptomatic of the underlying emotional maladjustment, measures to detect and understand the latter need to be utilized. The first step is to use the knowledge and sensitivities that the experienced doctor has in regard to his patients and their problems. This may sound simple but it is surprising how sometimes in a busy day we miss hints and signs and symptoms which are present in the patient and his reactions. These are clues to his basic trouble which may go unnoticed because we tend to separate the patient's behavior from his symptomatology; whereas, in the nervous system, behavior is symptomatology.

With an ear cocked for such hints, the physician, during his usualy examination, is alert to certain signs of camouflaged emotional upset. He knows how to direct his questions and to conduct himself in the interview so as to elicit significant information.

As a practical point, the time element is always under question. One doesn't have time to finish the complicated organic workup on a case of colon dysfunction, and then spend further time going further into the history to determine what situational problems may have been underneath the surface at the time the colonic disturbance appeared; or to try, detectivewise, to uncover some connection between life situations and episodes of colonic disturbances. However, since many of these cases take a good deal of time whether you wish it or not, a great deal can be learned, if one can accumulate little evidences here and there of the patient's possible inner turmoil during his numerous visits. The patient doesn't have to be aware that he is receiving some kind of psychiatric attention. In fact, the doctor doesn't even have to be aware that this is going on, but an open-mindedness about the possibilities of the nervous system affecting the colon will bring a surprising amount of information, especially if the patient senses that the doctor isn't going to be insulted, angry or impatient with such things as the patient might want to mention in this connection. Some patients need to be given little openings to talk about things other than actual pain or swellings or diarrhea.

The procedures of thorough history taking, examination, and testing for organic causes for the disturbances of the colon can be of therapeutic value in themselves without any extra effort or without any jeopardy of their value in detecting organic pathology. Very frequently a crucial point in the patient-doctor relationship comes when a thorough study for organic causes has been completed and has shown no pathology. During this time the doctor has made some observations regarding functional disturbance. The patient needs help in bridging the gap between the statement that there is no organic disease, and the implied or stated decision that it is "functional." He needs some simple explanation of how his symptoms can be there without demonstrable local disturbance. His automatic fear that his troubles may now be considered imaginary, or a reflection upon his character, needs correcting. He appreciates a little statement regarding the general lines of further study, symptomatic treatment, etc.

It used to be felt that something was peculiar about functional disturbances, and that therefore a person either had an organic disturbance or there was something morally wrong. As a matter of actual practice, the degree of functional change in any organ can be of various percentages and coexist with organic disease. If it exists in a significant portion, I don't care whether a functional disturbance of central origin is a 5% or 85% item in the patient's complaint, if it is a significant item, it is worth attending to. The occasion may arise to tell the patient this, and he seems to appreciate it because he sometimes has a sneaking notion that his disturbance might be related to the nervous system. Besides, in a doubtful case, what is more proper than to try to "clear the air" by treating a known trouble in order to make more clear the underlying organic condition if one exists?

A practical point in dealing with functional disturbances of the colon is the fact that "organ" disturbances of functional origin do tend to occur in so-called "non-neurotic" types of individuals, as noted earlier. The superficial absence of emotional or nervous upset is a frequent "red herring."

Other general principles: If one considers that the nervous system is not easily upset, one must guess that when the symptom first appeared, the nervous system had been stressed considerably before that time. So, somewhat contrary to history-taking in the case of structural diseases, one pays particular attention to the psychiatric factors present before the disturbance of the colon appeared. A further point is that in taking the past history, one tries to find out, usually in a conversational manner, some of the early conditioning influences that might have been present in relation to the parents and siblings.

Fortunately, the nervous system not only is difficult to upset in a chronic way, but it has a great deal of power to re-establish a balance. A faith in the patient's ability to reorganize himself in regard to his emotional tensions, if given half a chance, is basic to any kind of psychotherapy. It is a mistaken notion to feel that all of the patient's problems have to be solved for him or that he has to be assisted in some particular way because he is "weak" or "unstable." Most patients will do well with a good healthy boost or assistance in an area where they are having particular trouble. This is especially so if one can give them help in their relationship to certain basic emotional needs in life.

There are times when the physician will want to make an evaluation as to whether the patient needs specialized attention for his psychiatric problem. This is not easy to do. There is no reason why any physician, who is interested or wishes to take the time, should not do what he can to assist the patient in his overall problem. Every doctor is daily assisting patients in their functional disturbances, and some of his most grateful patients are numbered among this group.

Persistence of symptoms, recurrence after symptomatic relief, and appearance of other signs of general nervous upset are indications for further special attention to the emotional problems. This is especially true in younger people, where prevention of a long period of semi-invalidism may be possible. Many persons with chronic neurotic reactions may not seem to be in great distress, but taken longitudinally, their accumulated unhappiness, inefficiency and effect on others may be a considerable item.

Symptomatic care tides many people over difficult periods, but we should not lose sight of the fact that if the disturbance is in the higher centers and related to deep-seated emotional conflict, that is where the treatment, to be effective, will have to be applied.

CIVIL DEFENSE AWAITS BIOMEDICAL DATA ON ENIWETOK BOMB TESTS

Mice, pig and dog survivors of recent atomic weapon tests on Eniwetok atoll in the Pacific are expected to serve as basis for important biomedical research of value in civil defense planning. Civil Defense Administrator Millard Caldwell, following Atomic Energy Commission disclosures of tests, said Eniwetok experiments on shelters demonstrated that CDA is on the right track. In this connection CDA has just completed two-day conference of state civil defense engineers and technicians on subject of shelters in critical target areas. Brig. Gen. James Cooney, radiation safety adviser to the Eniwetok task force, reported later that surveys in immediate area of overhead bomb bursts failed to reveal any contamination of a serious nature. Food and drinking water outside the destroyed area continued to be fit for consumption. Dr. Cooney also reported tests showed rescue and recovery work could begin within two minutes after a high aerial burst.

Functional and Organic Disorders of the Colon

From the Viewpoint of the Proctologist

JULIUS B. CHRISTENSEN, M.D.
Omaha, Nebraska

The proctologist may be consulted in the treatment of cases of colon disease, but is more often called to make an examination of the bowel above the anal area. It is difficult to treat colonic disease, when we do not know definitely just what the pathologic changes are that have taken place in the mucosa and the wall of the bowel above the sphincter muscle.

At the onset then I would say that if you would intelligently handle a case of colon disorder, either functional or organic, you should get a diagnostic proctoscopic set. This would consist of one tube ten inches long and ⅝ inches in diameter with a suitable light, cord, and battery. An air bulb for inflation and a two-power lens are helpful. Swabs for cultures and a biopsy punch are extra equipment, but very useful.

There is probably no other instrument that there is less opportunity to use while in medical school, and more opportunity to use when you get into practice. Get a proctoscope and use it! You may see only one or two inches in the first case, but you will do better on nearly every succeeding case, until you can examine intelligently the rectal and rectosigmoid area. This area, so easily seen through a proctoscope, is the area which is so dificult to demonstrate on radiographic studies. Direct vision is better than a record of shadows.

A word about preparation. The common soap suds enema will not give you the normal appearance of the mucosa and usual activity of the colon. It always causes a great deal of acute mucosal irritation with secretion of mucus and hyperperistalsis. Therefore, use warm saline solution or mild saline laxatives.

Make the proctoscopic examination the third step in a routine inspection, anoscopic and proctoscopic examination. Important findings and clues to the existence of disease may be missed by skipping the complete routine. A case in which the constant burning at the anus more than any other thing may indicate to you the skin changes that occur when colitis extends onto the surface of the anal canal and paraanal skin. Large edematous skin tags may be found containing very little, if any vascular tissue. This is the type that reoccur, quite promptly, if removed without first treating the underly-infection. Acute inflammatory anal contracture often accompanies a colitis, and will contract again, if it is incised or divulsed. Any type of operation on the anus in these cases will produce a great deal of postoperative pain because of the infection present in the tissues, which always results in a flare up of infection before it again returns to its chronic state.

THE FUNCTIONAL COLONIC DISORDER

Let us now consider the functional colonic disorder. The greatest help that we can give is that in making a thorough study, including a careful proctoscopic, to assure the patient that there are no pathologic changes in the bowel. I often enumerate the common conditions as colitis, stricture, tumor, and end up with that word "cancer," because that is the one thing which so many patients fear. You have all seen people with many symptoms before examination suddenly dismiss all troubles as trivial after being told that they had no cancer.

The anoscopic and proctoscopic examination of the patient with functional disease will be negative.

THE ORGANIC COLONIC DISORDERS

What then can the proctologist do in cases of organic disorders. Here we can examine the colon and accurately describe the presence, extent, and progress of ulceration, inflammation, or tumor. In mild cases we may see only hyperemia or excess of mucus secretion. Repeated examination is very important in following the course of a disease. The type of stool is often helpful in diagnosis. The presence of blood, its amount, and distribution is significant.

Specimens of stool, and smears may be taken easily through a proctoscope. Biopsy of tumors or of involved mucosa may be taken for tissue study. The mucosa above the hemorrhoidal area is insensitive, and such biopsy specimens can be taken without special preparation while the patient is in the office.

The proctologist may be called upon to check up on the condition of the colon by regular examination, either to note the arrested colitis, or even more important, to follow for an indefinite number of years the case of polyposis. In cancer detection the proctologist is playing his most important role in preventive medicine. I want to remind you that roughly 80% of all precancerous polypi occur in the area visualized by a proctoscope, and the same per cent of cancers occur in this very same area.

Tuberculosis Abstracts

PNEUMOPERITONEUM IN TB TREATMENT

The present era is replete with major innovations in the treatment of tuberculosis yet pneumoperitoneum continues to provoke the discussion and controversy usually accorded a newcomer. First employed for the treatment of intestinal tuberculosis, then largely abandoned, pneumoperitoneum was subsequently recommended by Banyai for treating pulmonary tuberculosis almost 20 years ago. Experience has not yet defined the legitimate place of pneumoperitoneum among our therapeutic resources. Therapeutic pneumoperitoneum is produced by the instillation of air through a needle into the abdominal cavity much as air is introduced into the chest by pneumothorax. This air fills the space which surrounds the abdominal organs and which is separated from the contents of the thoracic cavity by the diaphragm.

In pneumothorax the object is to produce relaxation of a tuberculous lung by the action of the air which surrounds it and allows the lung to collapse. In pneumoperitoneum, also, the object is relaxation of a diseased lung. Here, however, the air does not act directly upon the lung but acts upon the diaphragm, increasing the pressure beneath it which causes it to rise higher in the chest. This reduces the size of the thoracic space and the lungs retract to a smaller size and relaxation results.

The diaphragm is fixed at its periphery and is composed largely of a sheet of muscle covered on the chest side with pleura; on the abdomen side, with peritoneum. Its resistance to stretching can be markedly diminished if the muscle of the diaphragm is paralyzed by crushing the phrenic nerve in the corresponding side of the neck. Hence, phrenic paralysis is often used in combination with pneumoperitoneum. Even the unparalyzed diaphragm can usually be stretched sufficiently to relax the overlying lungs to some degree, although this varies considerably in different patients.

In discussing therapeutic pneumoperitoneum, comparisons with therapeutic pneumothorax inevitably arise. Neither involve the immediate trauma and shock of thoracoplasty and pulmonary resection. Hence, either pneumothorax or pneumoperitoneum can often be applied where bed rest alone is inadequate but where major surgery does not appear suitable.

Both pneumothorax and pneumoperitoneum can be administered with reasonable hope that the collapse effect produced by them will remain subject to the control of the physician and that the collapsed lung will return to its pre-treatment size and function when treatment is terminated. Unfortunately, this hope is all too often unfulfilled.

In the period from 1930 to 1940, pneumothorax was regarded as the best form of collapse therapy for the vast majority of patients. Thoracoplasty was rarely employed except after an unsuccessful pneumothorax and resection of a tuberculous lung was deemed too hazardous. Pneumothorax was, however, impossible in many patients because the diseased lung was adherent to the chest wall. Complications were frequent and some of these were more serious than the pulmonary tuberculosis itself. Certainly the over-all results from widespread use of pneumothorax were disappointing. This led some clinics to avoid pneumothorax in all but exceptional circumstances; others continued to use it readily, but with much greater discrimination.

The decline in the use of pneumothorax has been accompanied by an increase in the use of pneumoperitoneum. Pneumoperitoneum enjoys the obvious advantages of a temporary and reversible collapse measure without many of the disadvantages of pneumothorax. Experience with pneumoperitoneum has demonstrated that, in competent hands, it is a relatively safe and well-tolerated procedure, and is capable of favorably influencing the course of pulmonary tuberculosis in many cases.

Up to this point, agreement among tuberculosis physicians is fairly uniform. Beyond this point, one encounters markedly divergent opinions and claims. The difficulty of evaluating a therapeutic procedure in a disease as protean in its manifestations and as variable in its behavior as pulmonary tuberculosis has long been recognized. Data from the prolonged observation of patients treated with pneumoperitoneum are still rather limited. Nevertheless, present evidence appears to justify certain conclusions.

The advantages of pneumoperitoneum are most apparent in the treatment of patients with acutely active tuberculosis who are too ill for immediate thoracoplasty or resection and in whom complications from pneumothorax are excessive. Pneumoperitoneum is especially valuable as a means of producing sufficient improvement to prepare such patients successfully for major surgery. Modern chemotherapy has lessened the need for pneumoperitoneum in this particular role but it is sometimes advantageous to use both pneumoperitoneum and chemotherapy.

Also, a temporary collapse measure is still widely preferred to major surgery for the treatment of patients in whom the extent of disease and of pulmonary damage is limited, although the increasing number of successful results from the localized resection of tuberculous lesions may radically alter this attitude. Pneumoperitoneum provides such a temporary collapse. The advantages of increasing the effectiveness of pneumoperitoneum by adding phrenic paralysis must be weighed against the permanent functional impairment which frequently results from the combination.

Neither pneumoperitoneum nor pneumothorax is likely to prove effective in patients with extensive destruction of lung tissue. When the function of a lobe or of a lung has already been impaired by destructive tuberculosis, the damage is irreversible. Therefore, unless the patient is a poor surgical risk, it is unwise to elect pneumoperitoneum for such le-

(Continued on page 280)

The Nebraska State Medical Journal

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Subscription $2.50 Per Year. Single Copies 35c Each

The Publication Board does not assume responsibility for opinions expressed in original articles published in this Journal.

Manuscripts should be typewritten, double-spaced, and the original, not the carbon, submitted.

Reprints should be ordered from the printer, The Huse Publishing Co., Norfolk, Nebraska.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

Vol. 36 August No. 8

THE A.M.A. TWELVE POINT PROGRAM

1. Creation of a Federal Department of Health of Cabinet status with a Secretary who is a Doctor of Medicine.
2. Promotion of medical research through a National Science Foundation with grants to private institutions which have facilities and personnel sufficient to carry on qualified research.
3. Further development and wider coverage by voluntary hospital and medical care plans to meet the costs of illness, with extension as rapidly as possible into rural areas.
4. Establishment in each state of a medical care authority to receive and administer funds with proper representation of medical and consumer interest.
5. Encouragement of prompt development of diagnostic facilities, health centers and hospital services, locally originated, for rural and other areas.
6. Establishment of local public health units and services.
7. The development of a program of mental hygiene with aid to mental hygiene clinics in suitable areas.
8. Health education programs administered through suitable state and local health and medical agencies to inform the people of the available facilities and of their own responsibilities in health care.
9. Provision of facilities for care and rehabilitation of the aged and those with chronic disease and various other groups not covered by existing proposals.
10. Integration of veterans' medical care and hospital facilities with other medical care and hospital programs and with the maintenance of high standards of medical care.
11. Greater emphasis on the program of industrial medicine.
12. Adequate support with funds free from political control, domination and regulation of the medical, dental and nursing schools and other institutions necessary for the training of specialized personnel required in the provision and distribution of medical care.

Organization Section

CEREBRAL PALSY UNIT

One of the Nebraska State Medical Association's finest achievements in recent years is about to become a reality. Through the recommendation of the Cerebral Palsy Committee, the legislature before adjourning this spring appropriated $50,000 for the next biennium to establish a cerebral palsy unit at the state Orthopedic Hospital in Lincoln.

Before taking any definite action, the committee outlined a basic plan for the unit and then sent its recommendation to the state Board of Control. This was followed by several meetings with the board at which times all aspects of the unit were thoroughly discussed. The board, which will administer the unit, has asked the committee to serve in an advisory capacity.

At the time this is written, final plans of organizational procedure are yet to be formulated, but the following is a general resume of how the unit will operate:

The size of the unit will be between eight and ten beds. Nebraska residents in the younger age brackets are eligible for admittance. No fixed age limits have been set, but it is felt that younger patients are more apt to show improvement than older ones.

Persons admitted to the unit must first be referred to an Admissions Committee from one of the following: 1. Dr. J. P. Lord School (Omaha). 2. Crippled Children's Clinic. 3. Dr. Bruner Clinic. 4. Orthopedic Hospital. The Admissions Committee will make final disposition on each application.

It is contemplated that each patient will stay in the unit for four weeks. Some may stay longer if their involvement requires additional care. A member of the family will be required to be present at the unit during the patient's last week before discharge. In order to receive daily instructions on the training to be carried on in the home.

The patient will receive instruction and care in speech, occupational and physical therapy. All patients are to be under the direct supervision of the medical director and his consulting staff of pediatricians, orthopedists, ophthalmologists, neurologists, etc., who will outline the therapy in their particular fields.

Approximately three months after discharge, the patients will return to the unit for evaluation of their progress and further direction of their home-training program. The parents will also return for further instruction during the three to five-day second admission period.

The objectives of the unit are to aid the patients in their:

1. Ability to locomotion.
2. Ability to communicate.
3. Ability to care for themselves.

It is hoped that certain departments of the University of Nebraska will participate in the unit. The services of the unit are free to those who cannot afford to pay. A fee may be paid, however, by those financially able to do so. Nevertheless, admittance to the unit is to be based entirely on the estimated ability of the child to respond to the treatment, and not on financial considerations.

The unit will be under the supervision of a physician who will serve on a part time basis as both medical director and administrator. This physician has not yet been selected.

One of the most important functions of the unit is to provide proper instruction for the parents in continuing the therapy at home. It is in this area that the physician members of the Nebraska State Medical Association assume a good deal of responsibility for the success of the unit.

Experience in other states has shown that many parents become discouraged and either relax the home-training program or discontinue it all together. The family physician should keep in close contact with these parents and their children, giving them the encouragement necessary for continuing the work in the home. If this is not done, the advances made while the patient was in the unit in Lincoln will soon be dissipated.

It should be remembered, too, that the parents of these children are literally desperate in their search for someone who can help them. This is best exemplified by a survey which was taken among the patients of a similar unit in another state. This survey showed that the average of these patients had been taken to nine physicians, two chiropractors, one osteopath, plus faith healers and others.

If the Nebraska State Medical Association can report to the next legislature that the patients of this unit have made substantial progress, the physicians of Nebraska can rightly be given a large measure of the credit.

REPORT OF DELEGATES TO A.M.A.

This report of the Delegates to the American Medical Association will only mention the highlights of the annual meeting June 10th to 15th at Atlantic City, N.J. There were registered 12,229 physicians and 16,167 guests.

Of the House of Delegates which consists of 201 members, 200 members were present at the opening of the meeting, an attendance record for this group.

Dr. John W. Cline of San Francisco was installed as a new President, Tuesday evening, June 12.

Dr. Lewis H. Bauer of Hempstead, New York, who had been chairman of the Board of Trustees was elected President-Elect of the Association without opposition.

Dr. Allen O. Whipple, a New York Surgeon, was awarded the distinguished service award.

The other officers named will be published in the coming A.M.A. Journals.

Of interest to the Nebraska doctors will be the eulogy by the speaker, Dr. Frank Borzell on the death of our own Dr. Roy W. Fouts.

A resolution on Dr. Fouts' death introduced by Dr. James P. Wall of Mississippi was passed unanimously by a standing vote.

An interesting feature was the presentation of a check to Dr. Elmer Henderson, president of the American Medical Education Foundation, for $10,000 by the Woman's Auxiliary. This represented 20% of the Auxiliary's annual income.

Two resolutions presented by your delegates for the Nebraska Medical Association in regard to Hospital Standardization and combining of meetings were disposed by the former having been taken care of by the Board of Trustees action. The second resolution, to combining the various staff and pathological conference with the County Medical Society was referred by the reference committee to the Board of Trustees with the request that they take action and consult with the American College of Surgeons, and report back at the December session this year at Los Angeles. This report was approved by the House of Delegates. Your delegates sincerely hope that you will read the entire proceedings in your weekly A.M.A. Journals.

Your Nebraska association was represented by your delegates, McCarthy and Hohlen, alternate Morgan and your executive secretary, M. C. Smith.

K. S. J. HOHLEN, Delegate.

BUY U. S. DEFENSE
☆ ☆ ☆ BONDS ☆ ☆ ☆

Announcements

EXTENSION CLINICS

Listed below are the dates and places of the Crippled Children's Clinics (Extension Clinics) for this month:

Aug. 4, Chadron, Elks Club, Drs. Fred Teal and George Robertson.

Aug. 18, Norfolk, Norfolk State Hospital, Drs. W. R. Hamsa or L. S. Campbell and John Thomas.

The Sixth Annual Postgraduate Course in Diseases of the Chest sponsored by the Council on Postgraduate Medical Education and the Illinois State Chapter of the American College of Chest Physicians, will be presented at the St. Clair Hotel, Chicago, Illinois, September 24 through 28, 1951.

This course will emphasize the recent advancements in the diagnosis and treatment of chest diseases. The number of registrants will be limited. Tuition fee is $50.00; applications will be accepted in order in which they are received. Applications should be sent to the American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

The 16th Annual Assembly of the United States Chapter of the International College of Surgeons, will be held in Chicago on September 10th through the 13th, 1951, with headquarters at the Palmer House.

An excellent program has been arranged. Prominent surgeons from the United States and other countries will participate. Scientific sessions will be held by all specialty sections of the United States chapter.

Hotel reservations may be arranged by writing to the Housing Division, Chicago Convention Bureau, 33 North LaSalle Street, Chicago 2, Illinois.

News and Views

The Board of Directors of the Nebraska Chapter, Academy of General Practice, met in Omaha on June 28, 1951. A one day fall clinical meeting was planned to be held in Omaha. The exact date, probably in September, will be announced later.

Dr. William J. Gentry of Gering was appointed delegate for the 1952 National Convention.

Dr. Edward R. Slavik of Platte Center and Dr. James D. Bell of York were elected to regular membership, and Dr. John A. Kalin of Omaha to associate membership.

Item from Polk (Nebr.) Progress:

It's that same old story again, "out of town for a doctor," as Dr. Scholnick closed his offices in Polk at the end of last week. He is to report soon in California where he will join the surgical staff of a hospital.

No doctor is at present available for Polk but the Village Board is in an attempt to locate another doctor for us.

Let's hope they succeed, and the sooner the better.

Following is an editorial from the West Point Republican:

IMPORTANT HEALTH RECORD—CAUSE OF SATISFACTION

Amid the welter of other news that engages the human mind, it might not be amiss to call attention to the fact that 1950 established two important records in connection with public health.

Infant morality was 29.2 per 1,000 live births. This beats the former rate of 31 deaths per 1,000 in 1949, which set a record.

The maternal death rate for 1949 the latest year for which figures are available, was .8 per 1,000 live births. This was the first year in which the rate for maternal deaths fell below one for each 1,000 live births.

Much of the success for maintaining an improved public health is due to the fight to prevent infant mortality and to save mothers in childbirth. That the effort is succeeding should be a cause of widespread satisfaction throughout the nation.

According to an Associated Press report of July 8:

Enough doctors, dentists and veterinarians have volunteered for military service to make draft calls unnecessary so far.

Since October 16, 1950, to June 30, this year, 4,960 physicians either have volunteered for active duty or have accepted commissions and indicated their willingness to be called up.

The Lexington City Council approved an ordinance providing for the transfer of the Community Hospital to the city, effective July 1.

At a meeting held last June 28th, the Washington County Medical Society went on record as being wholly in favor of a county hospital to be erected in Blair, according to Dr. R. F. Sievers, president of the organization.

FROM THE AMERICAN MEDICAL ASSOCIATION

Army Details Policy on Civilian Medical Care for Service Personnel. A 5-page fact sheet of interest to the medical profession has been issued by the Office of the Surgeon General of the Army. It outlines current policy on authorization and payment of civilian medical care for Army personnel while on leave in localities without Federal hospital facilities. The Army says the continued cooperation of civilian physicians and agencies is "of utmost importance in providing adequate medical services to the U.S. soldier in time of need."

Among the points made in the report are (1) normally, civilian medical care for Army personnel is authorized only when there are no other federal medical treatment facilities available, (2) first aid or emergency treatment is authorized at any time regardless of proximity of federal facilities, (3) surgical operations should not be performed without prior approval of military authorities unless an emergency, (4) elective medical treatment in civilian facilities by civilian physicians will not be authorized as Army funds cannot be used for payment, (5) bills for authorized medical care and treatment of Army personnel should be submitted to commanding officer of the patient or to military authority who okayed the medical services.

New Defense Policy on Assignment of Nurses. Acting on recommendations of Armed Forces Medical Policy Council, Secretary of Defense Marshall has issued a directive aimed at more economical and efficient assignment of registered nurses in the armed forces. Marshall said the nine-point program ordered for the Army, Navy and Air Force was designed "to eliminate a needless drain" of nurses from the civilian economy, yet assure that military personnel continue to receive best possible nursing care. Among other things, the program provides that ward and dispensary nurses be relieved of routine housekeeping, clerical, supply, food service and other non-professional duties.

DETAILS OF AGED HOSPITALIZATION PLAN PROPOSED BY ADMINISTRATION

Note: This is a condensed statement of facts and arguments advanced by FSA Administrator Oscar Ewing. No attempt is made in these pages to appraise the suggestion. This is merely a report on what the plan contains and on his explanation.

Mr. Ewing, with administration support, has proposed a system of hospitalization for the aged and certain dependent groups. At this writing drafting of the bill has not been completed, but it likely will be introduced soon. Following are the main provisions:

Persons Covered. All persons 65 and over (and their dependents) who are entitled to social security cash benefits, regardless of whether they actually are receiving benefits; widows under 65 with dependent children; any other survivors who are eligible for SS benefits under existing law.

Benefits. Sixty days hospital service in any one year; hospitals to be paid for services, drugs and appliances which the hospital customarily furnishes to its bed patients; specifically excluded are (1) medical care, except that generally furnished as an essential part of hospital care for bed patients, and (2) semi-private accommodations, unless the beneficiary himself is willing to pay the difference.

Limitations. While FSA would regard this hospitalization as the insured right of eligibles, not all could be taken care of. Because of wide variations in the rate of hospital occupancy, potential beneficiaries in certain areas would find it difficult, if not impossible, to obtain the service. Mr. Ewing explains that on the national average, hospitals are 71 or 72 per cent occupied, whereas 85 per cent is considered the practical maximum. In theory, beneficiaries would have access to this 13 or 14 per cent not now occupied. Also, the program would not cover tuberculosis or mental patients, nor most chronic patients. Mr. Ewing said a chronic patient would be eligible if his condition became acute. However, he said specifically that rest homes and domiciliary homes could not participate.

Administration. At national level, the Federal Security Administrator or his agent would set policy; the Federal Hospital Council (of Hill-Burton program) would advise him, but would not have veto power. State health departments would be encouraged to handle the program and work out contracts with hospitals, but if a state declined to participate, individual hospitals would be authorized to deal directly with FSA. State-licensed hospitals would be eligible; if the state did not license, a participating hospital would have to meet standards set by FSA, in consultation with Federal Hospital Council. Mr. Ewing said provision would be made to keep patient records confidential, and to insure that the federal government would not control hospitals or participate in their policy-making.

Financing. The program would be financed by what Mr. Ewing describes as surplus in current social security collections from employers and employes. If, instead, these costs were to be assessed against payrolls, FSA experts estimate that the increase would be only 1/10 of one per cent on both employers and employes, an amount regarded by them as too small to justify the increase. Mr. Ewing said that this operation would not constitute use of funds legally earmarked or committeed for other purposes. Total cost of the first year (probably 1953), is estimated at $200,000,000, a figure arrived at in this manner: By that year, about 7,000,000 persons would be eligible (5.5 million over 65). FSA planners, who said they were using insurance statistics as well as their own public welfare records, said they estimated the average person over 65 years required about two and a quarter days of hospitalization each year, with eligible younger adults and children averaging between half a day and a day. The total of these patient days, multiplied by an assumed hospital cost of $15 per day, produced the $200,000,000 estimate for the first year. It is contemplated that a hospital's patient day cost will be determined by average out its costs for "administration, dietary, housekeeping, nursing, x-ray laboratory, etc., but excluding costs for outpatients, research, etc."

Certification. A patient would not be eligible for hospitalization until a physician had certified that this was necessary. It would be the responsibility of the physician to decide when a chronic case, ineligible for hospitalization, became an acute case, and therefore eligible. Under the plan, the physician himself would make arrangements for placing the patient in a hospital if space could be found.

Administration Arguments in Favor of Plan. Sponsors emphasize that this plan would provide a form of hospitalization for groups of people least able to obtain non-government hospitalization (the aged) as well as those least able to afford such coverage (widows and dependents). Furthermore, they point out that this would mean a reduction in federal, state and local public welfare contributions. Mr. Ewing said, "Benefit checks (at current rate) cannot be stretched to cover unpredictable and heavy expense of illness requiring hospitalization." He cited several spot-check surveys of cities as evidence, including one which found that less than three-fifths of old age assistance beneficiaries were able to pay their expenses from their own resources when hospitalized. The sponsors report that only about 10 to 15 per cent of the people over 65 have hospitalization insurance and believe that "even if voluntary hospitalization insurance were more readily available to older persons, limitations on the benefits—largely unavoidable in such policies—would discourage their purchase because such limitations greatly reduce the adequacy of the protection.

Sponsorship. The plan has been under preparation for many months, with a number of outsiders, including some labor leaders, advising and assisting FSA officials. Mr. Ewing said at his press conference that he had also consulted with officials of the American Hospital Association and the Catholic Hospital Association. He did not say, however, that these groups supported the idea. Mr. Ewing said he had talked it over with a number of Senators and Congressmen before making the plan public officially. Asked if he thought there would be opposition, Mr. Ewing said, "I can't conceive that anyone with a heart would oppose this. This is something they will have paid for themselves in insurance . . . I can't believe doctor's don't want sick people to have attention.

JOS. S. LAWRENCE, M.D.,
Director, Washington Office.

THE CAMP FOR DIABETIC CHILDREN

We had sixteen children, six boys and ten girls. About half of them came from Omaha and Lincoln and the other half from a number of different towns scattered over Nebraska. About two-thirds of the children paid and the remaining one-third paid a token payment or none at all. We had sufficient funds in Springdale Camp Association funds to take care of our needs this year. It cost about $50.00 to keep a child in camp for the two-week period. We were pleased to receive from a number of different sources a total of several hundred dollars. The giver in each case indicated that he wanted to pay for all or part of one child. Apparently this will be a popular way to raise money in the future.

The camp was a decided success. The children were given a morning lecture on diabetes in general and an afternoon class in dietetics.

We will have a camp next year at the same place and same time of year for 25 or 30 children.

It is important to recognize the several organizations which have contributed to the success of the camp: State Department of Health who gave us Miss Anna Smrha for a three-weeks period; University of Nebraska of Lincoln gave us Dr. Ruth Leverton for two weeks, both medical schools were of considerable assistance; Boy Scout and Girl Scout organizations both contributed in obtaining counsilors and in planning activities. We are very anxious to have the continued cooperation and assistance of these groups.

I want to emphasize in particular the assistance that was given us by the Nebraska State Medical Association. Considerable mimeographing was done for us by the State Association. The Public Relation Committee through the newspapers made it possible for us to have excellent releases in a great many papers. Those who have been interested in diabetes have been particularly impressed with how much the State Association has done both in establishing this camp and in our effort to discover the unknown diabetic last fall.

F. L. ROGERS, M.D.

THE AMERICAN PHYSICAL THERAPY ASSOCIATION

The American Physical Therapy Association held its twenty-eighth Annual Conference in Glenwood Springs, Colorado, June 16-22. The program of the conference centered around such interesting topics as Amputees, Chest Disabilities, Tuberculous and Non-Tuberculous, and Neuropsychiatry as Related to Physical Therapy.

Following the lectures on these varied topics, movies and workshops with demonstrations were conducted to instruct physical therapists in the latest and most effective methods of administering physical therapy. The Nebraska Chapter of the Association was represented by six members.

A meeting of the Executive Committee of the Nebraska Chapter was held at the Orthopedic Hospital in Lincoln, June 10. The purpose of this meeting was to plan a goal toward which each of the committees and the organization as a whole might strive to accomplish this year. This goal is wider recognition as registered physical therapists, obtained by maintaining better public relations with the national office, other physical therapists, members of allied professions and lay people.

The main feature of our regular July meeting was a discussion of the report of our delegates to the National Convention.

BOOK RECEIVED

Practical Clinical Psychiatry—7th Edition, by Edward A. Strecker, Litt.D., LL.D., M.D., Professor of Psychiatry, School of Medicine, University of Pennsylvania; Franklin G. Ebaugh, M.D., Professor of Psychiatry, University of Colorado, School of Medicine and Director, Colorado Psychopathic Hospital; and Jack R. Ewalt, M.D., Professor of Neuro-Psychiatry and Administrator of Hospitals, University of Texas Medical Branch, Galveston. Section on "Psychopathologic Problems of Childhood" by Leo Kanner, M.D., Associate Professor of Psychiatry, Johns Hopkins University School of Medicine. 35 figures, 14 tables, 506 pages, June 13, 1951, $7.00. The Blakiston Company, Philadelphia 5.

This seventh edition of a standard text for psychiatrists has been brought completely up-to-date with modern psychiatric teaching and thought.

Written by recognized leaders in the field, it is also designed for medical students and general practitioners who, because they treat the vast majority of psychiatric patients, need to keep abreast of modern developments.

The Armed Forces Classification of Mental Disorders as well as the American Psychiatric Association Classification of Mental Disorders is included. There is a new section on Support Therapy which outlines effective methods of treating patients requiring treatment less extensive than orthodox analytic procedures.

Know Your Blue Shield Plan

By not billing patients for services until after receiving payment from Blue Shield, physicians build good will for themselves and Blue Shield, and demonstrate their active interest in making their prepayment plan operate effectively.

Blue Cross and Blue Shield make it possible for hospitals and doctors to receive prompt payment for services to many patients who might otherwise be unable to pay for necessary care, or would require many months to save enough to meet their major hospital and medical bills.

If you have a criticism or a suggestion which would improve the service of Blue Shield, please present it to the Prepayment Medical Care Committee of the Nebraska State Medical Association. This committee maintains close liaison with the Blue Shield Plan, regularly referring suggestions and recommendations to the Blue Shield Board of Directors for consideration and action.

Reminder: Reports of Blue Shield services should be mailed promptly upon the patient's dismissal from the hospital, or upon completion of services. (There is no liability upon Blue Shield for services reported more than 90 days after the services are rendered unless it can be shown that it was not reasonably possible to submit the report within 90 days).

Human Interest Tales

Communications bearing human appeal are solicited. They should be addressed to The Editor, Nebraska State Medical Journal, 111 So. 39th, Omaha.

Dr. W. Howard Morrison of Omaha announces the association of Dr. Stanley H. Truhlsen.

Dr. David Ikast of Lincoln has accepted an appointment with veterans hospitals.

Condolences of the Journal go to Dr. B. R. Farner of Norfolk on the recent death of his wife.

Howard has a new doctor. Dr. Jerome Sayler opened his office during the month of July.

Dr. Joseph L. Wilson has joined the staff at the Veterans Hospital in Omaha on the neuro-psychiatric service.

Earling's first doctor for the past six years is Dr. W. W. Keihlbough who opened his office in June.

Dr. G. L. Scholnick left Stromsburg for California where he has a residency at the Sawtelle Hospital at Los Angeles.

Dr. Charles Rider of Imperial spent some time in Denver during the month of June, taking postgraduate work.

Appointed first lieutenants in the Medical Corps are Dr. Gilbert S. Ryder and Dr. Ronald T. Nakashima of Omaha.

Dr. Fay Smith of Imperial became Grand Senior Warden at a meeting of the Masonic Grand Lodge held in Omaha in June.

Honored by the people of his community, and presented with a gift for his distinguished record was Dr. Charles W. Pollard of Peru.

Dr. J. E. Nordstrom of Shelton left for Fort Sam Houston at San Antonio, Tex., where he will be stationed at the Brooks army medical center.

Called to active duty with the Armed Forces, is Dr. Byron D. Peterson of Bridgeport. Dr. Peterson is to report at Randolph Field, San Antonio, Texas.

Dr. J. R. Schenken of Omaha was elected to the American Board of Pathology, early in July. Dr. Schenken has also been cited for outstanding work in cancer control.

Director of the division of industrial hygiene in the state health department at Lincoln, James C. Gilliland resigned, to join the staff of the University of Colorado Medical Center at Denver.

According to a news report Dr. C. W. Dingman of Lincoln was killed in a airline crash. Dr. Dingman had been transferred to San Francisco as a physician for United Air Lines. He was a graduate of the Nebraska University College of Medicine.

Deaths

Dr. E. H. Worthman, Louisville. Born in Chicago in 1876. Was brought to Nebraska by his parents early in childhood where he grew up in Seward. Graduated from Creighton University School of Medicine in 1900 and located in Louisville the same year.

Dr. Worthman was prominent as a civic leader with active interests in professional, social and church activities. He was known widely in the southeastern area and always enjoyed a good practice until a few years before his death May 29, 1951. Surviving are his son, Dr. Herbert, of Louisville, and a daughter, Mrs. George T. Erickson, the wife of Dr. Erickson of Broken Bow.

Raymond H. McCoy, M.D., Tecumseh. Born in Tecumseh in 1925. Graduated from University of Nebraska College of Medicine in 1948. Following his internship he served with the U.S. Army Medical Corps in Germany where he contacted poliomyelitis. He was retired from the army service with rank of captain. Following his discharge from the army he returned to Tecumseh where he practiced until July 4, 1951, when he died from myocarditis. Surviving are his wife and a daughter.

The Research Department of Modern Medicine has recently completed a survey to determine the ownership of x-ray equipment in the medical field. Replies from 1,725 physician readers of Modern Medicine were received and represent a cross-section of the U. S. medical population.

The statistics indicate that 32,250 privately practicing physicians in the United States own x-ray equipment and that there are a total of 5,170 diagnostic and therapeutic installations in U. S. hospitals. This places total medical x-ray installations at 37,420.

The report shows that 19,680, or 61 per cent, of all physicians owning x-ray are General Practitioners, and 1,300, or 4 per cent, are Radiologists.

TUBERCULOSIS ABSTRACTS

(Continued from page 273)

sions instead of the ultimately more effective and more durable thoracoplasty or resection.

While modern surgery and modern chemotherapy have reduced the indications for temporary collapse of a lung, the need has not been eliminated. Many physicians still prefer pneumothorax for this purpose, but pneumoperitoneum can be employed even when pleural adhesions prevent satisfactory collapse by pneumothorax. Moreover, pneumoperitoneum can be employed with safety where the hazards of pneumothorax are excessively high. The results from pneumoperitoneum are sometimes definitive; at other times it produces sufficient improvement to make definitive surgical therapy feasible. Finally, pneumoperitoneum may produce improvement — though not often a cure — in patients with extensive disease in both lungs and with poor respiratory function who are unable to tolerate any other form of collapse therapy or surgery. It is extremely important that the limitations of pneumoperitoneum be recognized. However, its value in the treatment of certain types of pulmonary tuberculosis has been clearly established.

—Kirby S. Howlett, Jr., M.D., The NTA Bulletin, March, 1951.

INFANTS ARE BIG BENEFICIARIES OF ADVANCES IN MEDICAL SCIENCE

Newborn babies and infants under one year of age have been among those to benefit most from advances in medical science and the efforts of public health agencies during the first half of the century, according to Matthew Taback, A.M., director of the bureau of biostatistics, Baltimore City Health Department.

Mr. Taback, writing in the July 7 Journal of the American Medical Association, said that approximately 20 babies out of every 100 delivered alive in Baltimore in 1900 failed to reach their first birthday. A review of present day records indicates that the mortality rate has decreased at an "unbelievable rate" and now stands at about three infant deaths per 100 live births, a decline of 85 per cent since 1900, he added.

Commenting on the death rate of 50 years ago, he said:

"The loss of human life and wasted pregnancy occasioned by the existence of such a high infant mortality rate are difficult to comprehend. Principal causes of infant deaths in 1900 were diarrhea, pneumonia, acute communicable diseases, prematurity and congenital malformations."

The principal causes of infant deaths today, he said, are prematurity, congenital malformations and birth injury.

He pointed out that in a belief that further savings of human life can be achieved, Baltimore registration offices are now requesting data that will assist in the study of factors associated with prematurity, congenital malformations and complications of pregnancy. The information in birth records includes length of pregnancy, birth weight, complications of pregnancy and labor, operations for delivery and a description of birth injuries or congenital malformations when present.

SAVING PREMATURE CHILD IS MEDICAL PROGRAM "IN HIGH GEAR"

The saving of the lives of prematurely born infants "is a medical care program in high gear," according to Dr. Leona Baumgartner, assistant commissioner for maternal and child health services, New York City Department of Health.

Writing in the July 7 Journal of the American Medical Association, Dr. Baumgartner said that in cutting down the infant deaths from 10 per cent of live births in 1915 to 3 per cent currently, many of the earlier principal causes of death have been removed, leaving prematurity as the main cause.

She pointed out that prematurity was assigned as the chief factor in 41,000 deaths in the United States in 1947 and that New York records show the mortality of babies weighing less than 5½ pounds (a common measure of prematurity) was 13 times that of babies weighing more than 5½ pounds.

"Although different states are attacking this problem in different ways, a basic pattern is beginning to emerge," she said. "Most activities are guided in part by state and local health departments, and are financed in part by the federal grants-in-aid programs provided for under the maternal and child health provisions of the Social Security Act.

"Usually included are such activities as:

1. Training of nurses and physicians in the care of premature infants. This is a widespread activity.
2. Development of hospital standards and licensing, emphasizing facilities and personnel for proper care of premature infants.
3. Consultation to hospitals (principally by nursing consultants so far) in an effort to raise the standards of care for full-term as well as premature infants.
4. Loan of incubators, together with consultation regarding their use.
5. Transportation of premature infants to premature infant centers.
6. Development of premature infant centers and purchase of hospital care for them.
7. Measures designed to prevent premature labor, such as more and better prenatal services, with emphasis on diagnosis and the importance of adequate nutrition; obstetric consultation or complications during pregnancy; hospitalization for complicated pregnancy; and obstetric consultation aimed toward improving the management of the mother's labor and delivery in cases of premature birth (since most of the premature infant deaths occur on the first day of life.)"

Dr. Baumgartner said that health departments in many states are awaiting additional funds to develop or expand programs for premature infants. She suggested an eight-point plan providing: (1) first-rate facilities, staffed with well-trained personnel; (2) consultation services to hospitals and doctors; (3) measures to prevent premature labor; (4) transportation for and payment of hospitalization costs of premature infants when necessary; (5) aid which may be needed by the general practitioner; (6) adequate care of the premature infant after discharge from the hospital; (7) continued evaluation of activities and results as well as continued education of the public to use available services; (8) team work in planning and operating the program.

The Nebraska State Medical Journal

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

Vol. 36 Norfolk, Nebraska, September, 1951 No. 9

EDITORIAL

STRAWS IN AN ILL WIND

Three recent events should serve to convince us that in the words of Dr. George F. Lull, Secretary and General Manager of the American Medical Association "Socialized Medicine evidently is far from being a dead fish on the beach."

a. Early in July of this year Senator James E. Murray of Montana, chairman of the Committee on Labor and Public Welfare, addressed a telegram to the governor of each state in an effort to gather information on the distribution of physicians. According to the Senator "it has been proposed" (we need not wonder by whom) "that federal subsidies be used to persuade doctors to move to areas where there is an acute shortage of medical personnel." Each governor was asked to indicate whether in his state there were too many doctors, not enough, or just about enough doctors to meet the needs of its residents.

b. Early in August Mr. William Green, President of the American Federation of Labor issued an appeal to his 8,000,000 members and their families to go all out in their contributions to the Committee for the Nation's Health. He reminded his constituents of their pledge one year ago at their annual convention to continue the fight for national health insurance and for federal aid to train more doctors. The Committee for the Nation's Health, Mr. Green assured them is Labor's best ally, and contributions are needed by this committee to "help defeat the medical lobby's lies at the grass roots."

c. In the August number of this Journal we offered editorial comments on a press release by the Democratic National Committee, which may be considered at least a pre-election feeler on the value of medical socialization as a possible campaign issue in 1952.

The items mentioned here may or may not mean much singly or even collectively. We believe that at this time the American people are thoroughly fed up with false promises of "federal aid"—for nothing. Below we reprint an editorial from our own "Nebraska Agriculture" the official publication of the Nebraska Farm Bureau Federation. The editorial was sent to us by Doctor Lull. It is characteristic of the current feeling at the grass roots. However it would be more than folly on our part to sit back and assume that the public will denounce the false prophets just because we as physicians are against socialized medicine. On the contrary each of us must take it upon himself to familiarize our friends and patients with the true value of professional freedom and what it means in terms of personal medical care to a free people.

HELP CORRECT THE TAX INJUSTICE

Every one knows, and those responsible for writing and voting on tax bills readily concede, that our present tax structure is discriminatory. The situation, we are told, is unavoidable. Taxes which are fair and equitable designed to please everyone are unattainable even in theory. At least that is what we are told. We assume this to be so, and as good citizens pay our taxes as does everybody without complaining any more than human psychology dictates.

What has been difficult for us to accept over the years is the special hardships imposed on what Senator Ives of New York recently pointed out, "highly educated persons—who have, after prolonged schooling and training fewer earning years than the average person." The Senator reminded his colleagues that "lawyers and physicians for example, do not reach peak earnings from ten to nineteen years after commencing practice. Increased rates of taxation take dollars from professional persons at a time when they should be setting funds aside for retirement years."

Senator Ives stressed these remarks in support of his amendment to the recent House-past tax bill (H.R. 4473). This amendment permits eligible persons to pay each year—tax free—toward a retirement fund 10% of earned income, benefits to start at age 60 years or sooner in the event of permanent disability. There are other clauses in the proposal which define the plan in detail but which for our present purposes do not require discussion.

The American Medical Association for more than a decade has urged Congress to correct these injustices in our tax system. Indeed several bills have been introduced at previous sessions, only to be killed in committee. The present amendment having been introduced on the floor of the Senate will have to be brought up for discussion.

It is hoped that physicians over the country will be appreciative enough of the importance of this pending legislation to write to their Senators asking them to vote in favor of the amendment.

POST GRADUATE FACILITIES AT OUR DOOR

October and the Annual Assembly of the Omaha Mid-West Clinical Society are drawing close and many of our readers have already completed their plans to attend. Indeed few of us in active practice can afford to miss these sessions. In the eighteen years of its existence the Mid-West has brought to Nebraska a type of post-graduate medical education matched by few states and excelled by none. It would be difficult if not impossible to read off the names of the great in modern medicine who at one session or another out of the past eighteen, have not participated in the Mid-West sessions. And the nineteenth assembly proudly carries on the tradition of choosing the best that is available in the fields of teaching, research, and their clinical applications.

Physicians in this area are indeed fortunate in their ability to take advantage of these priceless facilities for post graduate training close to home. The Omaha Mid-West Clinical Society we are certain, feels justly proud of its opportunity to render this important service not only to the profession, but as well to the people of Nebraska.

WHAT IS FEDERAL AID?

"Nebraska Agriculture," official publication of the Nebraska Farm Bureau Federation, hit the nail on the head when it defined federal aid in a recent editorial.

"What is federal aid?" the editorial asked.

"Federal aid is a temporary expedient that was offered to state and local governments by idealistic bureaucrats at a time when state and local governments lacked the courage to face and meet squarely their own problems of administration. It is a delusion that has gained permanency because state and local governments have not had the courage to make an effort to solve the problems created by the depression years of the thirties and the war economy that followed. Federal aid has always carried with it the idea that it costs no one anything; it is just money that the federal government gives states and local governments out of the goodness of its heart.

"Don't you believe it.

"You and I and all the other American taxpayers pay dearly for federal aid. Every dime of federal aid is paid for in higher income taxes, higher costs of automobiles, higher costs of foodstuffs and everything farmers and consumers buy, because taxes are a big item in the costs of production of this nation . . .

"As a matter of fact, federal aid is the most expensive solution to problems faced by state and local governments, because taxpayers have to pay the costs of bureaucratic idealists who tell the states and local governments what share they shall have of the tax funds available and how they shall administer it."

Do Not Forget . . .

THE DATE: September 20, 1951.

THE PLACE: Hotel Cornhusker, Lincoln.

THE PURPOSE: An all day symposium on **"Cardiovascular Disease."**

THE SPONSOR: Nebraska Heart Association and Cardiovascular Disease Committee of Nebraska State Medical Association.

THE TIME: 10 a.m.

ORIGINAL ARTICLES

The Medical Schools and the Doctors*

R. G. GUSTAVSON, Ph.D.
Chancellor, University of Nebraska

Mr. Chairman, Ladies and Gentlemen: I consider it a great privilege to talk over with you some of the problems that face us today in connection with the teaching of Medicine for the development of the doctor of tomorrow.

We are all familiar in a general way with the early days of teaching Medicine. We recognize what that struggle has meant in terms of raising the standards in medical schools, in terms of eliminating the school conducted for private profit, in connection with eliminating weak schools who did not have the financial sustenance to do a good job, and in connection with the raising of standards in general. As a result of that movement we have today in the United States something like 76 medical schools, of which we may well be proud. They are serving our people, and on the whole serving them very well. Periodically, however, it is worthwhile to take a look, especially when we get to that stage when we begin to become thoroughly satisfied that there isn't need for any further improvement. That is the stage where we are today. We have been walking up a hill; we have arrived at the plateau; now we had better have another look at ourselves to see if there isn't another hill of accomplishment which we can climb.

I am first going to talk about the education of the premedic before he comes to the medical school. One of the amazing things about education in the United States that has developed in the past fifty years has been the large group of standardizing agencies, we call accrediting agencies. They had their birth in the development of the accrediting program of the American Medical Association and the American Bar Association and these two great organizations did, as I have indicated, a magnificent job in raising the standards of medical and legal education in our country.

As time has gone on we have seen these agencies become increasingly convinced that they know how an individual who is headed for a certain profession should be trained. Consequently there has been a strong tendency in almost every walk of life to standardize curricula, with an increasing effort, I would say, on the part of standardizing agencies to prevent experimentation with the curriculum. I am now speaking in very broad terms. I think the result of this is going to be bad for the profession. Let me give you an example:

Every premedical student takes general chemistry, some organic chemistry and a course in quantitative analysis; he is supposed to have a course in elementary physics; a course in general biology, followed perhaps by a course in comparative anatomy or mamalian anatomy or something of that general type. He comes to the medical school, trained at about that level. We have set up our situation in such a way that the individual who might be tremendously interested in Medicine eventually, but who for the time being might want to devote his time to the fields of, shall we say, mathematics, physics and chemistry, or some other discipline, and take a very minimum of anatomy, is looked upon as not adequately prepared for medicine.

It seems to me that that is something that we have to look at very carefully, not because there isn't a certain type of discipline through which the premedic ought to go in order to determine whether he is interested in Medicine and has the capacity to do Medicine or any other profession. Yet we also have to look at it from the standpoint of how well he is going to be prepared some day if he turns out to be the kind of an individual who is going to become interested in pushing out the frontiers of Medicine. How well is he prepared to do this if his whole training has been one to fit him into a mold, and which represents Medicine of today?

At the University in Lincoln just recently we had the pleasure of having one of the outstanding Zoologists of our country as our visitor for three or four days. I am referring to Dr. Paul Weiss, whose work on growth and differentiation, especially with respect to the nervous system, is known all over the world. It was my pleasure to have Dr. Weiss as my guest. "What was your preparation for the work you are doing?" I asked him. He smiled and said, "You will laugh at this, but I was a mechanical engineer."

I suppose most people would regard mechanical engineering as rather poor training ground for developing a Zoologist who was going to excell in research in growth and differentiation. Then I am sure if you will study Dr. Weiss's work you will see even in his public lectures a good many evidences of the training of a mechanical engineer in influencing the attitude that he as a Zoologist is taking toward the solution of his problems.

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*Read before Annual Convention Nebraska State Medical Association, May, 1951.

We become tremendously interested in the different fields of knowledge, and one thing of course that stands out very, very plainly to anyone who even cares to stop for a moment is to look at the tremendous advances we have made in the field of mathematics. The mathematician can well be proud of the fact, I suppose, that seldom have we ever met a problem in the applied world where mathematics was involved that mathematicians had not already developed the formula necessary to solve the problem. It is because mathematicians by the very nature of the subject that they work with have always been willing to look at their problem from many different points of view.

The mathematician assumes that a straight line is the shortest distance between two points and on the basis of that he builds Euclidian geometry. He does not hesitate for a moment to assume that a straight line is not the shortest distance between two points and on that basis a whole non-Euclidian geometry was laid out by the Russian Nikolai Lobachevski who was one of the great mathematicians. Then when we meet some of the problems of Relativity growing out of the Einstein observations, where the ordinary Euclidian geometry does not suffice, we find that the work of Lobachevski fits.

Someone has said that a foolish consistency is the hobgoblin of little minds, and that is worth thinking about. It was my priviledge recently to sit with a national committee that had at its disposal a considerable sum of money to be awarded to students who wanted to attack basic problems in Medicine. These were fellowships that ranged in value from $6,000 to $8,000 a year and it was our privilege to interview about 60 young men from all parts of the country. These men had been trained in a variety of our Medical Schools. They had done well. They had finished their internships and in most cases their residencies. They had become interested in some fundamental problem and wanted to go back and work on it. In the interview, when the young man came to the problem, the tools, in terms of the basic sciences in almost every case were deficient. Dr. Thomas Murdock of Yale, one of our committee, characterized it: "It is rather tragic, but these boys are trying to catch a train that has gone by."

As a result of this, the National Foundation for Infantile Paralysis decided that they would try to do something to encourage an interest in research at a level in medical education where the train is still in the depot as it were. As a result, this particular year we are going to give a $400 scholarship covering two months during the summer period, one to each medical school, for some student who wants to take that summer to work with a research worker in his institution and learn what it means to try to push the frontiers back, with the idea that if he finds this is what he likes he can vary his program of preparation for the fundamental work all of us know needs to be done today.

So it would seem to me, from the standpoint of the universities as a whole who are becoming tremendously concerned about the effect of accrediting agencies on education in America — whether it be in the field of journalism where everybody is going to write the same way, or in the field of chemistry where everybody is going to be trained in the same way, or law or medicine or whatever the area you may think of — it is extremely important today to see to it that the pre-professional training has in it all the basic essentials for determining whether the individual has the ability or whether he is interested in the field. But beyond that, we ought to see to it that there be the widest scope of preparation, because it is only as we bring minds that have had this wide variety of background that we can hope to tackle some of problems that face us today.

We recognize that in our medical schools today we are giving our young people an amazing opportunity to use the basic sciences, the laboratory technics in the diagnosis of their particular problems, and this of course is one of the great things of our day. And everyone rejoices in the fact that the technics of chemistry, of radiology, are powerful tools today in all the ramifications that have come out of that basic discovery in helping to diagnose disease, and this of course means sound basic training. But we also recognize that equally important, and perhaps even more so, is the opportunity for that student of medicine to develop judgment, and judgment can only come to us through experience.

Therefore, some trends in medical education today are very sound. We are beginning to realize that there was a great deal to be said for that rather primitive way of learning medicine by studying with the doctor, by going with him on his rounds, by seeing the patients with him and reading the book between trips. We recognize its limitations, of course, but to my mind the trend in medical education today of giving the student an early contact with the patient, of giving the medical student this opportunity to work with the practicing physician, as is being started in the preceptorship program at the University of Nebraska this summer, for example, is a sound sleep.

I want to take a moment to express the high appreciation and gratitude of the medical students as well as myself for the opportunity that many of you men are going to give these physicians of tomorrow to learn medicine by working with you during these preceptorship days. It is a marvelous thing and is merely another example of the fact that your profession has always had a deep and a sustained interest in the training of the doctor who is to follow It is a part of the Hippocratic oath and it is one of the parts of that oath that to me has great significance. That is exceedingly important because unless we watch very carefully what we are doing in medical education we are going to find ourselves over-emphasizing these laboratory technics which seem to be so definite but which also have their limitations. I am not a physician. I came up through the field of bio-chemistry. It has been my pleasure to be associated with medical schools. I would probably represent even the extreme of the individual who relies on the laboratory, but I have had just enough experience with clinical problems to know that there are limitations.

In giving the medical student of today the experience on which to rest judgment, which is one of the greatest essentials of a physician, let us look at our own Medical School. I think that in our medical faculty we have this plasticity, as it were, with respect to the training of the doctor to a far greater extent than it exists in many medical schools. Our men realize how important it is to get different points of view to bear on the problem. But this problem of giving a large amount of experience on which to build judgment (which we are taking care of to some extent by the preceptorship) involves having an opportunity to see much clinical material while he is in training in the medical school.

We have a limited number of beds. Because of financial difficulties we have even had to close one of the wards that we do have. For the number of students we have today there isn't any question but what we should have a Hospital with at least 400 beds in order that the clinical opportunity of the students be adequate. Units 3 and 4 must be built if we are going to take care of this very great lack in our Medical School.

We have been proud of our Medical School, but I think we have forgotten that it is also possible to be so satisfied with the situation that we forget to watch the onward progress being made elsewhere. So we today are tremendously concerned about increasing the number of beds in order to give adequate clinical experience to the medical student, the intern and the resident.

I am personally very grateful for the great interest that has been taken by this association in helping us make the people of Nebraska see how terribly important it is to have a good medical school and how absolutely impossible it is to get a good medical profession to support a poor Medical School. For that you will always have my undying thanks. The problem is far from solved and we need to keep our shoulders together on this wheel for a good many months to come in order to solve this particular problem.

We have to realize that the building of Unit 3, which probably can be taken care of through the University's share of the state building levy, is not sufficient because when the hospital becomes reorganized, as it should be, with the development of Unit 3 we will not add very much to our bed capacity. Unit 4 is the essential if we are to increase the number of beds to about 400.

We are also facing a very difficult problem today with our work in psychopathology. We have had the opportunity to work with the Douglas County Unit, where we have emphasized early diagnosis and treatment. That particular situation is now being threatened for a number of reasons. Among them is the fact that Douglas County Hospital just does not have enough space.

Everyone who has given even passing attention to the problem of mental disease knows how easy it is through neglect to allow the beginnings of mental disease to become crystallized and to place upon the shoulders of society a patient who for the rest of his life must have custodial care.

Therefore, the part that we have to play in early diagnosis and in early treatment is a tremendous one. When we realize the part that psychosomatic medicine and psychiatry in general is beginning to play in the life of the average practitioner, when we see the change that is taking place in our social structure, we see how terribly important it is that a psychopathic hospital be one of the units on the Medical School campus or that provision be made for an increased opportunity of the medical students of today to see modern psychiatry in practice.

I suppose that it is a question whether the amount of mental disease has increased or not. Homes of today are not being organized the way they were fifty years ago, when the aging grandmother or grandfather or the individual who everybody recognized was not normal found his place in the family circle. The family was built in such a way that that individual could stay there, but due to the changes in our whole socio-economic outlook, where increasingly both man and wife are out working, where we are finding ourselves in more limited quarters as far as housing is concerned and all that sort of thing, increasingly these people are becoming a part of the responsibility of society as a whole and the cost problem is an enormous one. Therefore, I plead with you to help us get adequate hospital facilities in terms of beds and in terms of a psychopathic hospital where early diagnosis and treatment shall increasingly be the opportunity of the medical students who come to us.

When you look at the two-year budget of the University of Nebraska you find that that budget is in itself too small to accomplish what should be accomplished. I am grateful for the recommendations that have come from the budget committee, but as we think particularly of the problem of the Medical School and as we think of the relationship of the product of that Medical School to the people of the State of Nebraska, it is easy to see that the $2,600,000 out of the present appropriation which we planned for the Medical School is totally inadequate. But it does not help very much to increase the budget as such until we have found adequate facilities in terms of buildings to house the kind of Medical School that we want to build, and if we can all get behind an adequate building program for the University, then the budget will take care of itself, because if you are going to man those buildings the way they should be manned the budget obviously will have to increase with it.

I want to say just a word along this line: There sometimes is a feeling that because of the very, very close relationship between our medical schools and the health of our communities it is only good sense to favor the Medical School over and above the development of the rest of the University. I say I can readily understand the feelings of the layman when he thinks in those terms and the feelings of the physician whose concern it is to take care of the layman, and yet the whole experience in education indicates that point of view is wrong.

May I just call your attention to the fact that in the struggle for existence that has taken place over the past seventy-five years, shall we say, practically every medical school that was not associated with a university has fallen by the wayside. Why? For the simple reason that it is impossible to develop a good medical school independent of its associations with a great university, because medical practice of today is based upon the work in the fundamental sciences of today.

We must also recognize that while the physician is of course all-important in our great problem of giving services to those that are ill, there are other great teams working for the health of our community though not in the field of professional medicine. We all know that the botulinus organism can get into our foods from the soil. We all know the close relationship that exists between milk as it is gathered from the cow and the milk bottle and the sources of this type of impurity in the milk, and we also know that the spores of that organism are not destroyed by a pasteurization process. All of which means that that part of our team, as we look at society as a whole, that has its task to carefully supervise the condition under which milk is gathered and processed and to look over the whole problem of the by-products of gathering milk in the form of cheese and butter and so on, that that represents an exceedingly important part of maintaining the health of our community, and that is one of the reasons why you must always have over here in the University the basic machinery for training the people who are going to do that kind of a job.

Then there is the most important problem of relationship that almost every profession bears eventually to the medical profession and to the health agencies of our community. When you ask yourself why it becomes possible for quackery to live in our so-called educated communities there is only one answer. We have not developed in the field of journalism the kind of ethical standards that are necessary to protect our public. We have not developed the social conscience in our radio organizations to protect our people.

One of the responsibilities of the University is to point out to the coming journalist and to the coming radioman his tremendous social responsibility, because he can do tremendous damage and also great good by recognizing what real factual medical and health practices are. If I had time I might discuss some other factors of that general type.

Therefore, let us remember that a great university has a great medical school, that you cannot build a great medical school without at the same time having a strong university, and surely you have not a complete university unless you have a strong medical school. Today, when we are doing so much work trying to get an early diagnosis of cancer, trying to use such technics as flourescent spectrum, it is easy to see how essential it is to have the teamwork of the individual who was trained in the physical sciences working with the man who is so close to disease.

So what I want to do today is to thank you for the great stimulus which you have given, for the great help you have offered, and to ask you to keep your shoulder to the wheel to help us build a great Medical School as a part of a great University.

IT HAPPENED IN OMAHA—

A housewife had just moved into a new neighborhood, was anxious to line up some grocery service. She dialed what she thought was the grocer's number and asked:

"Do you deliver?"

"We certainly do," replied the obstetrician's nurse.—(From Omaha World-Herald).

Arteriosclerosis—Present Concept of Significance, Pathogenesis, and Therapy*

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Arteriosclerosis is a major problem in all aspects of human endeavor. Its influence is evident in the fields of sociology, economics, diplomacy, and medicine. This paper will be limited to the presentation of the medical aspects of arteriosclerosis. This condition is the chief factor in the ageing process. It is a disease when occurring prematurely in the orderly process of growing old. It is the cause of disease processes produced by hypertension and diabetes. Neither of these conditions produces serious hazards to the health of an individual unless the blood vessels become arterioslcerotic. This is now true in diabetes, because with the proper use of insulin diabetic coma occurs rarely.

The number of individuals over sixty-five has very greatly increased. There were 4.1% of the people of the age of sixty-five and over in 1900. In 1950 7.6% of our population were of this age, approximately 11,000,000 people. At age sixty-five the expectancy of life is 13.2 years. This is about two years greater than in 1900. (1) There are good indications that this period of life will be lengthened. It is not unreasonable to expect an average of 75 years to be attained in the next ten or twenty years. Good public health measures, together with social security which provides better housing and better food, are influences in this achievement. Another important factor is that formerly the aged population frequently succumbed to pneumonia, so much so, that it was called the "friend of the aged" by Sir William Osler. With the advent an antibiotics this is no longer true, and many individuals who would succumb to the effects of respiratory infections and especially pneumonia are spared by the use of the antibiotics.

A careful analysis of this increase in longevity is necessary in order to evaluate its true significance. The simple increase in life span without regard to the quality of these years is completely futile. If these years are spent in invalids homes, this factor of increased longevity is a liability rather than an asset. The real progress made by this increase of age is entirely dependent on conditions of the vascular fields of the individual. The chronological age is not important, but the arterial age is the determining factor. There are three vascular fields which determine the destiny of an individual man, namely (1) cerebral arteries, (2) coronary arteries, and (3) renal arteries. The condition of the coronary and renal arteries in a relatively short time decide the fate of the individual. When the deterioration of both these vascular fields reaches a certain stage, life cannot continue. However, this is not true of the cerebral arteries. The vascular field of the brain may so deteriorate as to eliminate practically all of the functions except those which have to do with the vegetative or somatic states. In other words, a very small part of the cerebral vascular system may carry on the vegetative state permitting this individual to exist (not live) for a number of years. Many of these are a great burden to their families and to society. Frequently they are kept in invalids homes. A better term for the latter would be "a living morgue."

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*Read before Annual Convention Nebraska State Medical Association, May, 1951.

Generally then it may be said that all deaths, due to cerebral vascular disease chiefly, hemorrhage and thrombosis, all heart disease due to arteriosclerosis of coronary arteries which includes the effects of hypertension and diabetes, and practically all chronic renal disease, are due to vascular deterioration. A few cases of peripheral occlusion are also caused by arteriosclerosis.

Statistics (2) shows that this group of diseases caused 61% of all deaths. This clearly gives arteriosclerosis first place as a major medical problem. The number of people over sixty-five in the midwest is particularly important. (3) In Nebraska 9.4% of the people are over sixty-five years; in Iowa 9.9%; in Missouri 9.8% These are the highest figures anywhere in the United States. The problem which causes about two-thirds of the deaths of our patients merits our best thinking. It is a good sign of the times that several organizations have been formed and devote their activities to the study, especially the etiology, of this disease. The American Society for the Study of Arteriosclerosis has already made many important contributions and undoubtedly will make more in the future. The Gerontological Society, Inc., concerns itself with all phases of this subject including the medical problem.

Arteriosclerosis or hardening of the arteries occurs in several different ways, one of which is a simple evolutional ageing change. In this, there is atrophy of the media and a replacement of muscle and elastic fibers by collagen. This gives rise to long tortuous vessels and is frequently seen in the temporal arteries. This involves no change in size of the lumen. In fact, if often leads to an increase in the size of the lumen, and does not lend to thrombosis or rupture. It is followed at times by calcifications, which gives rise to the ordinary beaded radial arteries. This occurs chiefly in the peripheral vessels, however, it may occur in the splenic artery, but rarely in the coronary arteries. This results in a rigid vascular system causing increased systolic blood pressure. The effect of this blood pressure is usually not detrimental. This condition rarely needs treatment, which at best is ineffective.

The change which most frequently results in disaster by rupture or occlusion is that which is due to atherosclerosis. This consists of large or small deposists of cholesterin into the intima of the blood vessels forming masses of pultaceous material resembling mush, hence, the name atheroma. (4) The character of these lesions was described by Marchand and Windhaus, and were first reproduced in rabbits by feeding cholesterol by Anitschow. It is this type of lesion which is the subject of intensive study at present. It is chiefly concerned with the type of molecule which produces these infiltrations and tissue reactions. There are, however, some as Paul Klemperer, who state that the formation of these lesions may be due to an alteration of the interstitial tissue more than to the deposition of cholesterol and lipids. Paul Tannhauser(5) states "Arteriosclerosis is a disorder affecting the elastic structure and ground substance of vascular walls. The precipitation of cholesterol is a secondary process caused by the physical properties of the altered tissues."

At present the chief interest has been in cholesterol, lipoproteins, and phospholipids. These are being studied by many able workers. Gofman(7) has identified certain of this type of aggregates of lipoproteins, which he believes are associated with the production of arteriosclerosis. The view is that certain large aggregates become enmeshed in the intima of the blood vessels and produce certain tissue reactions either by fibrosis or by degeneration in the intima and part of the media leading to atherosclerosis and atheromatous ulcers which are conducive to the formation of thrombi and occlusion of vessels. Extensive investigation has been in progress regarding the production of these lesions, in rabbits, dogs, chickens, and rats. It is evident that the causes of atherosclerosis are very complex and probably varied, but as stated by Dock(6), "There has grown up an impressive body of evidence that this lesion is due to deposition in the intima of cholesterol and its esters and to the resulting mild foreign body type of granuloma formation and scarring." These plaques in the young stimulate more fibrous tissue proliferation, thereby forming firmer lesions which rupture less frequently. In the elderly these lesions are more thinly covered and rupture more easily. It has also been suggested that the thickness of the intima is a factor in the formation of artherosclerosis. The intima of the coronary arteries is much thicker than that of the mesenteric and radial arteries, and also have far more atheromata.

It has also been suggested that the intima in the coronary arteries is thicker in men than in women. With a heavy fat diet causing a lipemia, these larger aggregates of lipoproteins are more abundantly deposited in the intima. This deposition of the cholesterol and its esters is more frequently seen in diabetes, nephrosis, hypothyroidism, and hypertension. Gofman(7) has also shown that certain of these aggregates are increased in cases of coronary infarction, especially in younger individuals. From the various reports it becomes increasingly evident that the etiology and the pathogenesis of artherosclerosis has not yet been solved. This apparently will be a problem for the biochemist and the biophysicist. It is encouraging that many capable scientists in this field are devoting their attention to this extremely important problem. There seems to be some unanimity of opinion that atherosclerosis is concerned with fat metabolism.

The pathogenesis of arteriosclerosis is obscure and requires a critical analysis. There are, however, several factors which may have some bearing on the solution.

(1) Heredity. It has long been accepted that the condition of the blood vessels is largely a hereditary factor. However, this may not be a matter of the potentialities of the germ plasm as much as influence of a familial diet. Also the hereditary influence of increased blood pressure and of diabetes may be the critical factors.

(2) Nutrition. There are many implications that this subject will occupy a major role in studying the development and the causes of arteriosclerosis. It is probable that the chief factor in final analysis will be related to nutrition. Dock(6) states, "Where a luxus diet prevails, diabetes and arteriosclerosis flourish." Gillick(8) states, "Atherosclerosis is the most critical disorder of the coronary artery. Relationship between the presence of lipid substances in the blood and those found in the lesions of arteriosclerosis are a matter of much interest. Research in this area may provide very important information as to the role of dietary intake and the total problem of atherosclerosis." There seems to be a definite opinion that obesity in an important factor in the production of arteriosclerosis, and also in the production of diabetes and hypertension which accelerate the onset and development of this vascular deterioration. Maintaining a slightly subnormal weight level is accepted as having a beneficient effect on the development of arteriosclerosis. Many are insistent on using a low fat diet, particularly animal fats. It is thought that butter with its large aggregates of lipoproteins should be avoided.

The work of Holman(16) suggests that certain fat diets may change the interstitial tissue so that the deposition of the cholesterol and its esters may be facilitated. It has been demonstrated that a fatty meal producing a lipemia permits the deposition of certain phospholipids or lipoproteins. Rabbits on a high fat diet more consistently show atherosclerosis, when fed cholesterol. Whether these experiments are applicable to the development of arteriosclerosis in the human race is questioned by many investigators. It has been shown that cholesterol and its esters are increased in younger individuals having coronary infarction, and also those who have xanthoma. It was noted (9) (10) that individuals with a familial tendency to maintain a high blood cholesterol also are more susceptible to arteriosclerosis This may be due to faulty liver metabolism. Furthermore, observations made by Morrison show that patients with coronary sclerosis maintained on diets low in cholesterol showed a definite benefit by this type of diet.

That lipothrophic substances, such as choline, inosital, and pyridoxine prevent the development and even absorb atherosclerosis is claimed by some$^{(10), (11)}$. Davidson$^{(17)}$, et al showed by his experiments with dogs that no protetcion against atherosclerosis was given by these substances in high cholesterol feeding. Morrison$^{(14)}$ was of the opinion that these substances have a favorable influence in cases of coronary infarction. It is obvious that much longer observation will be necessary to evaluate the effect of these lipotrophic substances.

Endocrine agents influence fat and cholesterol metabolism. In hypothyroid states the hypercholesterolemia can be reduced with thyroid extract. Both estrogenic and androgenic hormones are reported to be of value in reversing atherosclerosis in the experimental animal$^{(15)}$. Morrison$^{(14)}$ reported that the case of a multi-hormonal therapy using five to ten thousand units of estrogens and 5 to 10 mg. of androgens daily in both sexes past fifty years of age, as shown by improvement in the serum phospholipid-cholesterol ratio, and in clinical effects.

CONCLUSION

1. The tremendous problem of arteriosclerosis is the chief problem in medicine, involving 61% of the causes of death of all patients, has been presented. 2. The etiology and pathogenesis seem to lie in the field of biochemistry and biophysics. 3. Measures which may prevent or postpone the onset of arteriosclerosis seem to be chiefly nutritional factors of a life long duration.

CAN ANYTHING BE DONE TO PREVENT ARTERIOSCLEROSIS?

DISCUSSION

DR. HERBERT P. JACOBI (Assistant Professor of Biochemistry, University of Nebraska): Dr. Niehaus has given us a comprehensive review of the problem of arteriosclerosis. One quickly learns from such a review of the complexity of the problem. Dr. Niehaus has summarized the contribution of Gofman and associates at the University of California. I would like to elaborate briefly on that contribution because it represents by all odds the most significant contribution in recent years to our knowledge of arteriosclerosis.

The earliest lesion which the pathologist can recognize is a deposit of lipid material within the intima and beneath the endothelium of the intima in the artery. This deposition of lipid is referred to as atherosclerosis and represents the primary lesion in arteriosclerosis. This lipid material contains a high proportion of cholesterol and must of course represent cholesterol which has been derived from the blood stream since the tissue in an artery cannot synthesize cholesterol.

However, cholesterol, per se, would not appear to be deposited for the reason that practically no unbound cholesterol is present in plasma. Virtually all of the cholesterol in plasma is bound to protein along with other lipid substances such as fat and phospholipid. This cholesterol in plasma circulates in the form of giant cholesterol-bearing lipoprotein molecules. A lipoprotein simply is protein to which is bound cholesterol, phospholipid, and fat. They are cholesterol-bearing molecules of enormous size. It would follow, therefore, that the lipid material which is deposited in atherosclerosis is not cholesterol itself, but rather, giant cholesterol-bearing lipoprotein molecules.

The recent work of Gofman lends credence to the point of view. Gofman by means of the ultracentrifuge has identified several types of giant cholesterol-bearing lipoproteins in normal plasma. Now, in plasma from individuals with atherosclerosis special types of giant cholesterol-bearing liproprotein molecules are to be found. These molecules are refered to as S10-20 molecules, the subscript denoting the rate of flotation in the ultracentrifuge. They also have been referred to less scientifically but more picturesquely as "giant killers." Gofman has accused them of "guilt by association" with atherosclerosis.

To illustrate: These giant killers are present in the blood of nearly all patients who have survived a myocardial infarction. This is significant in view of the fact that 95 per cent of such cases have coronary atherosclerosis, although it may never have been detected. Atherosclerosis is a feature of the following diseases: diabetes mellitus, nephrosis, hypothyroidism. An appreciable concentration of these "giant killers" is present in blood in these diseases. Atherosclerosis occurs commonly in sustained hypertension disease and coronary insufficiency. A high percentage of such patients show the presence of the "giant killers" in their blood. Thus, we see how these "giant killers" are guilty by virtue of association with atherosclerosis.

Interestingly enough, more than one-half of the men and a third of the women with no demonstrable vascular disease show high levels of these "giant killers." Presumably, these people are those who in time will develop atherosclerosis.

Of great importance is the fact that the concentration of these "giant killers," that is, these S10-20 molecules in blood, could be reduced by a diet low in cholesterol, that is, a diet containing 200 mg. of cholesterol per day. Such a diet can be achieved by eliminating meat fat, lard, butter, whole milk, cheese high in fat, fatty fish, egg yolk, and organ meats from the diet. This regimen would have no effect on the total cholesterol level in blood but does effect a gradual reduction in the concentration of the S10-20 molecules. Thus as Dr. Niehaus has stated, measures to prevent or postpone the onset of arteriosclerosis may well prove to be along nutritional lines of a life-long duration.

The question arises as to why these abnormal giant cholesterol-bearing lipoproteins suddenly make their appearance in blood. The answer of course is not known. Presumabily, these lipoproteins are synthesized in the liver. Thus, atherosclerosis may fundamentally be the result of some subtle defect in liver function.

Equally enigmatic is the question of why they are deposited in the intima. Some physico-chemical characteristic of the lipoprotein must account for this predisposition. For example, the abnormal lipoprotein may prove to contain a relatively low proportion of phospholipid. This would limit the water solubility of the lipoprotein and thus favor precipitation from the blood. Indeed, a majority of patients with artherosclerosis show a low cholesterol-phospholipid ration.

Only future research can provide the answers.

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Treatment of Advanced Malignancy of the Urinary Bladder and Prostate Gland*

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BLADDER

By the term "advanced malignancy of the urinary bladder" one usually thinks of a malignant process involving all of the layers which make the wall of the bladder. Urologists know by sad experience that all tumors of the urinary bladder should be considered malignant and treated as such.

Tumors with a pedicle can be easily removed with a resectoscope. The bladder wall at the site of the tumor is cut away through the muscularis of the bladder. Tumors with evidence of infiltration should always be treated by open operation. What is done at open operation depends on the site of the tumor and whether or not it has invaded the perivesical tissues.

If the cancer is located superior to the trigone of the bladder, segmental resection with removal of a cuff of normal tissue surrounding the tumor is the best treatment, providing the cancer has not penetrated into the perivesical tissues.

If the cancer is located on the trigone of the bladder, or has infiltrated into the perivesical tissues, we prefer transplantation of the ureters into the sigmoid, and cystectomy. This procedure is still too recent to evaluate properly. However, with improvement in technique in removing the perivesical fat and lymph nodes, good lasting results should be obtained. Many urologists prefer to insert radon seeds into the site of the tumor after transurethral resection or fulguration of the tumor of the bladder. It can cause severe pain and spasm of the bladder, but many report cures of seemingly hopeless cancer of the bladder by this method.

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*Read before the Omaha Mid-West Clinical Society, October, 1950.

X-ray in advanced cancer of the bladder is often of great help in effecting a cure, but at times the response is nil. I feel that all patients with tumors of the bladder should get a course of 3000R-3500R through multiple portals. X-ray has found its greatest value in the treatment of the sessile tumors and infiltrating tumors of the bladder. It is of far less value in treating the papillary types of growth. X-ray is of value in controlling hemorrhage from all types of malignant tumors of the bladder.

When the tumor has extended beyond any chance of palliation by excision or x-ray, an excellent method of controlling frequency, hematuria and painful urination is transplantation of the ureters to the bowel or skin. These patients have been relieved of symptoms of far advanced cancer of the bladder for as long as eighteen months.

Caudal analgesia gives prompt relief from pain in hopeless cancer of the urinary bladder. It is efficacious in incurable cancer with pain of any pelvic organ. A needle is inserted into the sacral canal and 40 to 60 cc. of warm 1% novocaine solution is injected. Relief of pain may last from three weeks to seven months.

PROSTATE

With the increase in man's span of life from 46.6 years in 1911 to nearly 71 years in 1949, an increasing number of patients with prostatic cancer is to be expected.

Most patients (95%) with prostatic cancer are advanced cases when first seen by the urologist. This is because: (1) lack of any symptoms until late in the disease; (2) failure of the patient to seek medical care when the symptoms do arise because he feels that these symptoms are normal for one of his age group; (3) failure to examine the prostate on physical examination; and (4) the fact that often a cancerous prostate feels normal because the malignant tissue is surrounded by soft, benign hypertrophic tissue.

Five per cent may be treated by perineal radical prostatectomy followed by diethylstilbestrol. 56 per cent of these patients may be alive and well after five years.

The treatment of the inoperable patients is palliative. We are coming more to the idea of doing nothing for advanced cancer of the prostate until symptoms arise such as pain or obstruction to urination. Pain is nearly always controlled by diethylstilbestrol in doses of 0.5 to 40 mg. daily. Ethinyl estradiol in doses of 0.15 to 2.5 mg. may be tried if diethylstilbestrol causes reactions such as painful enlargement of the breasts, nausea, cutaneous eruptions or loss of appetite. Both medicaments can cause these reactions.

If pain returns while the patient is on one of these drugs we perform bilateral orchiectomy. This gives further relief of pain in many instances.

If pain returns in spite of the above treatment, x-ray is often of great help.

Relief has also been given to these patients by injection of 1% novocaine into the sacral canal or by injecting 1 cc. of 95% alcohol into the subarachnoid space at the 4th interspace, after removing 1 cc. of spinal fluid.

Palliative therapy has increased the length of life of these patients. Before 1940 Nesbit has shown that out of 783 patients followed, 69.4 per cent were dead by the end of the second year after diagnosis. After the advent of estrogen therapy and castration only 30 per cent of 569 patients were dead after two years following the diagnosis of cancer of the prostate.

ARMY MEDICAL SERVICE REPORTS LOW DEATH RATE AMONG KOREAN PRISONERS

Department of Army estimates death rate among North Korean and Chinese Communist prisoners of war is averaging only 7 per cent, thanks to prompt medical attention by Army Medical Service. About 37,000 enemy prisoners have been admitted as patients to Army hospitals in Korea, and during 6-month period ending in March, 797,316 outpatient treatments were given to POWs and 179,416 vaccinations and immunizations. Officials reported this treatment, plus low and often non-existent standards of medical care provided by the enemy for their own casualties, have placed an unusual burden on Army physicians. Other findings include (1) enemy prisoners have unduly high incidence of leprosy, smallpox, typhus, typhoid, tetanus and other epidemic diseases, and (2) among Communist forces, undergraduate medical students fill most medical officer positions, while little or no provision is made for drugs, equipment or evacuation of casualties. All prisoners receive same care as UN troops, while enemy on other hand has refused behind-the-line inspection by International Red Cross.

Rheumatoid Arthritis—Diagnosis and New Concepts of Therapy*

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INTRODUCTION

Two years ago a drive by the Arthritis and Rheumatism Foundation to raise a fund of $2,500,000.00 for research in these disorders was attempted. In 1937 when the problem was already a major one, such a drive would have been impossible. Even today, our profession occupied with the death-dealing character of heart disease, cancer, and tuberculosis, is only beginning to do exhaustive research in the problems associated with diseases of the collagen tissues.

During the war, many medical officers became aware of the increasing incidence of rheumatic disorders. A typical distribution of admissions to a rheumatism center such as the Army and Navy General Hospital(1) revealed that rheumatoid arthritis constituted the largest single group.

TABLE I
INCIDENCE OF VARIOUS TYPES OF RHEUMATIC DISEASES AMONG THE FIRST 1,000 CONSECUTIVE ADMISSIONS TO THE RHEUMATISM CENTER, ARMY AND NAVY GENERAL HOSPITAL

	Cases	Percentage
Rheumatoid Arthritis (including rheumatoid spondylitis)	331	33.1%
"Psychogenic Rheumatism"	200	20.0%
Osteoarthritis (primary and posttraumatic)	136	13.6%
Fibrositis	134	13.4%
Rheumatic Fever	22	2.2%
Gonorrheal Arthritis	13	1.3%
Gout	10	1.0%
Miscellaneous Conditions	113	11.3%
Unclassified Diseases of Joints and Related Structures	41	4.1%
	1,000	100.0%

We wish to call attention to the fact that psychogenic rheumatism represented one-fifth of the cases. Just the same as a patient can manifest his incapacity to deal with life's situations by gastro-intestinal and cardiovascular complaints, so it may be expected that he could manifest this incapacity by rheumatic complaints. One notes that gonorrheal arthritis was 1.3%. With the widespread use of penicillin and the sulfonamides this figure may now be even lower. In contrast to that, one may reasonably expect that with our aging population the incidence of osteoarthritis, fibrositis, and gout will continue to rise. Certainly in the Arthritis Clinic at the Creighton University School of Medicine we find the incidence increasing.

Two-thirds of all chronic arthritis is either rheumatoid arthritis or degenerative joint disease. However, in making a differential diagnosis of a case of rheumatoid arthritis, one must bear in mind these other conditions: gonorrheal arthritis, atypical rheumatic fever, acute gout, tuberculous arthritis, arthritis possibly associated with focal infection and periarticular fibrositis.

RHEUMATOID ARTHRITIS VS DEGENERATIVE JOINT DISEASES

In the differential of rheumatoid arthritis versus degenerative joint disease one must take in consideration the onset, the characteristic involvement of the terminal phalangeal joints and the weight bearing joints, rather than the interphalangeal and metacarpophalangeal joints involvement as seen in rheumatoid arthritis. Rheumatoid arthritis can go on to ankylosis, whereas it practically never occurs in the case of degenerative joint disease. A patient with rheumatoid arthritis is asthenic. A patient with degenerative joint disease usually is robust and generally an older individual. There are few constitutional symptoms with degenerative joint disease. The sedimentation rate is seldom elevated, except, of course, when there is concurrent infection. The x-ray findings are characteristically different. Rheumatoid arthritis results in atrophy, in decalcification. Degenerative joint disease results in hypertrophy of the bone, eburnation and excessive deposition of calcium. The agglutination tests with hemolytic streptococci are usually positive in rheumatoid arthritis, whereas with degenerative disease they are negative.

RHEUMATOID ARTHRITIS VS. GONORRHEAL ARTHRITIS

In gonorrheal arthritis there is a characteristic history. The roentgen findings are those of a suppurative arthritis with complete destruction of the joint and very frequently bony ankylosis. As we mentioned earlier, since the advent of the sulfonamides and the extensive use of antibiotics, gonorrheal arthritis is exceedingly uncommon. A valuable measure in the differential diagnosis of the acute joint is the examination of the synovial fluid. In gonorrheal arthritis this will be purulent or at least containing a very high neutrophile count. It is important to remember that the man who had gonorhea could also be developing rheumatoid arthritis.

RHEUMATOID ARTHRITIS VS. RHEUMATIC FEVER

Usually rheumatoid arthritis is seen in a slightly older age group. It is an insidious progressive disorder, but occasionally is acute. Early, the problem of differential diagnosis may be somewhat difficult. However, as the disease progresses, the negative roentgen findings seen in rheumatic fever, the response to salicylates, the prolonged PR interval of the electrocardiogram are very valuable in differentiating the two conditions. There rarely is any permanent joint damage in rheumatic fever.

RHEUMATOID ARTHRITIS VS. GOUT

Gout occurs predominately (95% or more) in the male past 40 years of age. The onset is acute with a history of gradually increasing attacks. Podagra occurs in 70% of the cases. Tophi are a late sign of gout. There may be fusiform swelling but one sees involvement of the terminal phalangeal as well as the inter-phalangeal joints. The response to Cholchicine in adequate dosage invariably helps make the diagnosis. The blood uric acid is valuable. However, one must remember that after the administration of aspirin, salicylates or diuretics the blood uric acid may well be within normal limits. Therefore, it should be obtained at the onset of the attacks before any medication has been given.

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*Read before Annual Convention Nebraska State Medical Association, May, 1951.

We rarely see tuberculous arthritis anymore. It is associated with marked joint destruction, usually mono-articular and usually a guinea pig injection is positive. A tuberculous joint is nearly always a local manifestation of systematic disease.

RHEUMATOID ARTHRITIS VS. FIBROSITIS

Fibrositis, which is primary is not common and much of the pain which occurs in rheumatoid arthritis is due to secondary fibrositis. However, the lack of constitutional phenomena, the normal sedimentation rate, the absence of positive roentgen findings, and the tendency of symptoms to fluctuate with the environment, namely the weather and other factors, are more commonly seen in fibrositis. In order to illustrate the characteristic findings in the x-rays of a patient with rheumatoid arthritis it is unnecessary to x-ray all joints. Usually a film of the joint chiefly affected together with a film of the hands will give the most information. Often the periarticular swelling may be the most significant feature in early cases. Later osteoporosis of the regional bones, narrowing of the joint spaces, and destruction of articular margins are the chief roentgenological criteria.

TREATMENT

To the internist interested in rheumatology, rheumatoid arthritis represents big game and he uses against it as many weapons as are available. Unfortunately, as in the case of many chronic disorders, many of them have little value. We have, therefore, tried to list the various measures according to their importance.

MEASURES OF QUESTIONABLE VALUE

Extensive use of vaccines has been made, particularly in England. We are dubious of the value of most of them. We mention Vitamin D therapy only to condemn it. An adequate vitamin intake is wise but Dankowski(2), and others have demonstrated that the toxicity of Vitamin D is vastly underrated. We have had two patients who developed a urinary tract insufficiency as a result of Vitamin D therapy to such an extent that we had to discontinue it. Prolonged fever therapy has many advocates. Probably the method of choice is the use of typhoid vaccine and, in some cases, we are sure this is valuable. Recently Ishmael(3) of Oklahoma City was very enthusiastic about the use of combinations of Testosterone and Estrogen. In our hands they have not been satisfactory. Thyroid, of course, is indicated if the metabolism is below normal. Often it is not.

MEASURES OF PROBABLE VALUE

Blood transfusions appear to have some value during the acute phase. However, this procedure is not completely without danger, inasmuch as we have had some cases of anuria due to marked hemolytic reactions. The removal of definite focal infection is so universally recognized that by the time we see a patient he has already had his tonsils and teeth as well as many other foci removed.

One can't escape the fact that crysotherapy is valuable. 65% of the patients who receive gold will obtain relief. This favorable percentage, however, is tempered by the fact that in 40% of the patients who receive it, toxic reactions occur. In recent years, the use of smaller doses has lessened these reactions. Whether or not it has lessened the effectiveness of the therapy we cannot say.

Roentgen therapy has value only in rheumatoid spondylitis. We think it is of no value in the peripheral joints.

Patients often inquire whether they should move to a farm, dry climate with few storms. Yes, that is desirable. If one can make his living in Arizona that is wonderful. On the other hand, maybe the emotional disturbances which will be created by the move may offset the gain that occurs. Our Nebraska climate is not too bad for most arthritics.

GENERAL CONSIDERATIONS AND NEW CONCEPTS

We consider the following points vital in helping a patient with rheumatoid arthritis. It is most important for him to understand that his disease must run some sort of course; that there is no quick cure; that therapy must continue over a long period of time. Ragan(4) most recently made a survey of all the patients who passed through the Faulkner Arthritis Clinic at Columbia University over a fifteen year period, and it is surprising how many patients, if given sympathetic understanding and care over a long period of time, do have their arthritis burn out with a minimum amount of deformity or disability. We cannot overestimate the importance of psychotherapy. Short and Bauer(5) feel that in rheumatoid arthritics, worry, grief and anxiety can be major contributory factors. This has been our experience. We believe that in the face of our newer knowledge of the action of the hormones of the adrenal cortex this fits in perfectly with Selye's(6) concept of the effect of long continued stress upon articular tissues.

The past year or two has been epochal in the approach to the problem of rheumatoid arthritis. The isolation of compound E by Kendall and the use of it and ACTH in patients with rheumatoid arthritis by Hench and his associates(7), represents one of the greatest advances of medicine today. However, in face of development thus far it would seem that their value as therapeutic agents in rheumatoid arthritis will be overshadowed by the alteration in basic concepts of the disease which have been brought about by experimental investigation of these agents.

CHOICE OF HORMONE OR STEROID

Lewin and Wassem(8) reported spectacular beneficial effects in rheumatoid arthritis from the combined use of desoxcycorticosterone acetate in oil injected intramusculary followed immediately by an intravenous injection of one gram of ascorbic acid. We have been unable to see any benefits. Margolis and Caplan(9) and others(10) have been unable to confirm the observations of Lewin and Wassem. Likewise, they have been unable to find any evidence of subjective or objective improvement in patients treated by 21-Acetoxy A5 Pregnenolene (Artisone, Wyeth). We have used all of these drugs and found in no case any results remotely comparable to the effects of ACTH and cortisone.

It appears that ACTH and cortisone have similar effects in the rheumatic disorders. However there are essential differences which should be remembered. Physiologically they are not equally active, milligram for milligram. One milligram of ACTH is probably equivalent to two milligrams of cortisone. ACTH must be administered every six hours around the clock if the maximum effect is to be obtained. Cortisone, on the other hand, may be administered once in 24 hours or once in 48 hours. ACTH should be used only when there is an intact functioning adrenal gland. ACTH is stimulation therapy, whereas cortisone is substitution therapy. The adrenal status can best be determined by use of the "circulating eosinophil" or Thorn test. Randolph(11) has indicated a modification of this procedure which sometimes produces more uniform results. It would seem, therefore, that the decision as to whether ACTH or cortisone is to be used would depend largely on the circumstances. If the patient is being observed in the hospital during the acute phase, ACTH can just as well be given around the clock, and cortisone may be substituted later. Cortisone tablets have been used for oral administration by Freyberg(12) and his associates and it seems likely that the physiologic activity is equal to cortisone administered parenterally. We have used them in a number of cases and find the results equal to injection therapy. In view of the atrophy of the adrenal following cortisone therapy there is reason to believe that a course of ACTH therapy should follow cortisone therapy.

TREND TO LOWER DOSAGE AND NEW COMBINATIONS

Cortisone therapy is not curative, inasmuch as relapse almost invariably ensues when administration is stopped. Furthermore adverse metabolic effects may hinder its use because the hormone influences a wide variety of metabolic functions. As pointed out above it will not become a practical therapeutic agent until methods for prolonged administration have been devised which will avoid the the unfavorable reactions and yet preserve the effectiveness.

There is a definite trend toward the use of lower dosages. In the initial studies daily maintenance doses of 100 to 200 mg. of cortisone were employed but apparently this large dosage is not necessary in all cases. Recently Boland and Headley(13) have reported their experience with the management of rheumatoid arthritis by employing small maintenance doses averaging 60 milligrams daily over a long period of time. They found that giving 100 milligrams three times a week was satisfactory. Definite side effects occurred but they were reversed when the hormones were either discontinued or the dosage reduced. Margolis and Caplan(14) have reported the use of gold therapy immediately after the onset of the remission induced by pituitary adrenocorticotropic hormone. At the same time they continued small doses of ACTH. They were impressed by the better results in contrast to the discouraging aspects of relapse in many instances of long continued therapy with the hormone alone.

SIGNS OF HYPERCORTISONISM

The signs of hypercortisonism have been reported in varying combinations and at their maximum appear to be identical with those observed in Cushing's syndrome. Most common, of course, are sodium retention and altered fluid balance as shown by edema, sudden gain in weight, polydipsia and oliguria. Then there is the peculiar deposition of fat tissue about the face, the so-called "moon face," and about the trunk, which is alluded to as the "buffalo hump." Acne and mild hypertrichosis similar to that seen with testosterone therapy have been reported. Cutaneous striae have been described. A peculiar muscular weakness, fatigue and exhaustion have been noted as the post-cortisone state. Osteoporosis of the spine is common and should be observed. We feel that in older patients x-ray of the spine should be taken before treatment as a basis of comparison against later changes. We have tried to counteract the osteoporosis with testosterone therapy or more recently methyl-androstiol therapy. There may be impaired carbohydrate tolerance. There is alkalosis with lowered blood potassium, which may account for some of the weakness. Nervous system effects such as insomnia, mood changes and even psychosis have been reported. It is particularly important to note that insomnia is a significant adverse effect when it develops in patient receiving ACTH or cortisone. Nearly all of the above mentioned changes have been reversible. However in a few instances they have not disappeared. We believe that careful clinical observation will suffice for the recognition of these side effects. Complicated laboratory study does not seem to be required with the dosages now advised, though in questionable changes it is necessary for confirmation.

THERAPEUTIC CRITERIA

Steinbrocker(15) and others have emphasized the need of therapeutic criteria in evaluating the response of rheumatoid arthritis to any form of therapy. They have prepared a score card which takes into consideration the following factors and the percentage of improvement: joint swelling 50 per cent, sedimentation rate 15 per cent, joint mobility 5 per cent, joint tenderness 5 per cent, hemoglobin reduction 5 per cent, weight loss 5 per cent, joint pain 5 per cent, and others. You will note that 65 per cent of the improvement in rheumatoid arthritis is expressed by decrease in joint swelling and decrease in the sedimentation rate. However when the hormones are discontinued recurrence of the swelling and further elevation of the sedimentation rate appear at varying times in different patients. We are all familiar with the dramatic remissions sometimes induced in rheumatoid arthritis with the use of a new drug, but I am certain Hench and his colleagues, by their carefully controlled studies, have indicated that none of the benefits by these hormones has been psychic.

CONCLUSIONS

While these important agents, ACTH and cortisone, are here to stay, they are not without danger. They likewise will not be a completely satisfactory addition to the weapons with which we combat rheumatoid arthritis until more effective methods of prolonged administration become available.

We would say therefore that before employing these agents it is important that an accurate differential diagnosis of the rheumatoid arthritis be made. We would suggest further that the measures of proved value which we have employed in the past be utilized. These are mental and physical rest, rest to the involved joints, the great tripod of physiotherapy (heat, message, exercise), occupational therapy, diet, control of pain with the simplest measures such as aspirin, and the judicious employment of psychotherapy. Thus oftentimes excellent improvement will be secured without overburdening the patient with expensive medication, following the discontinuance of which he is most likely to have a relapse.

The greatest usefulness of hormone therapy is to induce a remission during which the above physical measures may be fully instituted. These measures should be continued after hormone therapy has been withdrawn.

We are hopeful that the utilization of these agents in the hands of investigators will lead us to more fundamental concepts of the etiology of rheumatoid arthritis and other rheumatic disorders and thereby point the way toward ultimate effective management.

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Hypersplenism

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The association of enlarged spleen with defective elements of the peripheral blood has for many years presented a thorny problem to the clinician. Through constant observation and diligent study certain syndromes have been sorted out of this broad field and great progress made in certain of these conditions. A striking example of this is congenital spherocytosis. In more recent years still other syndromes of defective blood maintenance have been described. This paper deals with a small segment of this problem.

Historically, Gretsel(1) in 1866 was the first to use the term "splenic anemia" and to describe cases of anemia showing splenomegaly. Banti(2) wrote extensively of this syndrome during the years from 1894 to 1914. In 1904 Cabot(3) drew attention to the leukopenia often present in splentic anemia. Rendu and Widal(4) were the first to suggest that the leukopenia associated with splenamegaly might be due to hyperactivity of the spleen.

The storage function of the spleen for the blood elements has long been known and in the event of emergency, the spleen has the power of contracting and furnishing a large part of its blood content to the rest of the body. It seems certain that the spleen also has the function of regulating the cellular elements of the blood. This regulatory mechanism occurs in two ways:

1. By phagocytosis of the elements of the blood.

2. By an inhibitory mechanism at the marrow level through a hormone produced by the spleen.

The anatomy of the spleen is admirably adapted to its function of phagocytosis and storage of the blood. The blood enters the spleen through its arterial system and moves very sluggishly through a mesh-work of splenic pulp finally being collected in the venous system. This percolating action provides opportunity for the process of phagocytosis to occur. It is estimated that the spleen contains one-third to one-fourth of the lymphoid and endothelial tissues of the body.

The spleen possesses normally a selective phagocytic activity enabling it to phagocytize old, abnormal, or damaged cells from the blood. This function may at times become perverted resulting in destruction of excessive numbers of erythrocytes and leukocytes. The storage function of the spleen may also become perverted resulting in excessive sequestration of cellular elements. To test this possibility, the epinephrine test has been devised. This test consists in the administration of .5 cc. to 1 cc. of 1 to 1000 epinephrine solution and noting the contraction of the organ and also the increase in the cellular elements in the peripheral blood.

A delicate balance exists between the production of blood cells by the bone marrow and their destruction by the spleen and other endothelial tissues. If production is unable to keep pace with excessive splenic destruction, then anemia occurs. tI is estimated that the bone marrow produces 10 million red cells per second while an equal number is destroyed by the spleen and endothelial tissues per second. Should the spleen destroy red cells at the rate of 15 million per second and the bone marrow be unable to increase its production, anemia must necessarily result. The bone marrow may be able to meet the increased demand for many years before decompensation occurs, resulting in anemia, thrombopenia, neutropenia, or all three. Kraecke and Riser(4) have prepared a balance sheet which summarizes the equilibrium previously stated in the following equations:

Normal marrow production + normal splenic destruction = normal cellular equilibrium.

Impaired marrow production + normal splenic destruction = depleted cellular elements.

Normal marrow production + excessive splenic destruction = depleted cellular elements.

The following observations may be presented in support of the hormonal theory:

1. Hyperplasia and maturation arrest is seen in bone marrow smears in cases of hypersplenism.

2. A slow rise occurs in circulating cells following splenectomy over a period of days or weeks as would be anticipated in escape from the maturation arrest.

3. The presence of old segmented granulocytes and the absence of metamyelocytes and myelocytes in circulating blood when leukopenia is present.

4. Splenic extracts of patients with idiopathic thrombocytopenic purpura produce a marked lowering of platelets when injected into rabbits(5).

Accepting the spleen as having a function it is not difficult to understand that this function might become overactive and exercise an injurious effect on the organism. Morawitz and Ettinger in 1919 suggested the use of the term "hypersplenism" to designate a hyperactivity of the spleen with resultant cytopenias. Dameshek(6) has used the term "hypersplenism" to describe the condition in which the spleen acts in an exaggerated fashion to regulate the growth and delivery of erythrocytes, neutrophiles, and platelets at the marrow level as well as increased hemolytic and phagocytic activity.

The clinical syndromes which have been described under the heading of hypersplenism include acute and chronic splenic neutropenia, acute and chronic splenic hematopenia of congenital and acquired type, familial hemolytic icterus, and thrombocytopenic purpura. Splenic neutropenia may occur as a primary condition or it may result from infection such as tuberculosis, syphilis, and infectious-like disease as rheumatoid arthritis, portal hypertension, lymhoid disease, and neoplasms, such as Hodgkin's disease and lymphosarcoma. Splenomegaly associated with a depletion of all three elements in the circulating blood is termed panhematopenia or pancytopenia.

Panhematopenia may be divided into two groups according to whether the anemia is hemolytic or non-hemolytic in nature. It may also be subdivided as primary and secondary. Patients with splenic neutropenia or panhematopenia usually complain of weakness and a tendency to repeated slight infection. Stubborn non-healing ulcers of the lower tibial region are comparatively frequent. In the primary type, clinical examination otherwise usually reveals only the enlargement of the spleen, while in the secondary type, the stigmata of the underlying disease will be found.

DIAGNOSIS OF HYPERSPLENISM

Although the final diagnosis of hypersplenism rests on the pathological examination of the spleen and on the patient's reponse to splenectomy, if the following criteria are present, the diagnosis of hyperplenism should be strongly considered:

1. A clinically enlarged spleen except in thrombocytopenic purpura.

2. Depleted cell values including neutropenia, anemia, or thrombocytopenia, or combinations of these.

3. Demonstration that bone marrow is not impaired.

4. Demonstration of splenic sequestration by the epinephrine test.

Kraecke places considerable emphasis on the epinephrine test but Dameshek states that in his experience the test is not reliable.

Leukopenia occurs in varying degrees involving primarily the granulocytes. The condition may come on rapidly or may exist over a period of several years.

The presence of a severe neutropenia or panhematopenia indicates a grave prognosis since these patients are subject to severe recurrent infection due to lowered resistance. Infections which the ordinary individual would readily overcome run a protracted course. Thanks to the help of antibiotics, these patients can more readily overcome these infections and be prepared for splenectomy.

In thrombocytopenic purpura, the blood values are normal except for the thrombocytes. Familial hemolytic icterus is diagnosed by the presence of splenomegaly, spherocytosis, bilirubinemia, increased cell fragility, and by family history of transmissible anemias.

TREATMENT OF HYPERSPLENISM

Palliative treatment in primary and secondary hypersplenism consists of blood transfusions pending further observation and studies. In primary hypersplenlism, the condition tends to recur and may result in a fulminating crisis such as we see in the crisis of thrombocytopenic purpura. It has long been known that splenectomy has been successful in correcting primary thrombocytopenic purpura in a large percentage of cases. In children, splenectomies may be delayed in this condition since spontaneous remissions are frequent. In adults, however, delay may be fatal because of the danger of cerebral hemorrhage. Splenectomy is not ordinarily indicated in secondary purpura, although helpful in properly selected cases.

In neutropenia and panhematopenia the excessive action of the spleen produces a deleterious effect. The object of treatment is to counteract or prevent excessive action. In our present state of knowledge, this can be done only by splenectomy. This is the treatment of choice in primary neutropenia and panhematopenia when sufficient observation has shown the condition to be unremitting. The results are almost uniformly good and often dramatic. The best results may be expected in patients whose bone marrow exhibits active granulopoiesis and an abundance of megakaryocytes. The deficient cellular elements gradually increase to a normal level and sometimes the neutrophiles increase considerably above normal. In time, the neutrophiles become regulated at a level within the normal limits or slightly below. The red cells show considerable increase but usually do not return completely to the normal level. The patients have much more resistance to infection and show greater endurance. Splenectomy may also be indicated in certain cases of secondary hypersplenism although it should not be done routinely. Hypoplastic and aplastic anemia may be benefited by splenectomy through increasing the life of the individual cells.

CASE REPORT

Mrs. W. B. H., a 57-year-old white American housewife was first seen on January 27, 1949, because of severe crusted and swollen lesions of the upper and lower lip recurring over a period of 15 months. These lesions were severe recurrent herpes. Treatment with smallpox vaccine prevented any further recurrence. The patient also complained of extreme fatigue and dizziness when she got out of bed and assumed the upright position. For several months there had been throbbing headaches in the frontal areas. One year previously she had been examined at the Mayo Clinic where she was told she had anemia although she did not know what type. Vitamins and hematinics were prescribed and she had taken these regularly. On two or three occasions sulfonamides had been prescribed by her local physician. She had not used aminopyrine nor had she been exposed to any toxic substances to her knowledge. The patient had had psoriasis for many years. In 1918 she had a severe attack of influenza. In 1936 a thyroidectomy was performed.

Father and mother are living and well. One daughter died of leukemia at the age of 16.

Physical examination: Well developed, well nourished middle aged woman. She was quite alert. Temperature was 98.4° F. The skin over the entire body except the extremities was somewhat tawny with a brownish pigmentation of the forearms. Numerous psoriatic lesions were present over the trunk and extremities. The hands and feet were pale as were the mucous membranes. Numerous fading ecchymotic areas of the extremities varying in size from a dime to a dollar were noted. An extremely large, subsiding herpetic lesion was present on the upper lip. No recurrence of thyroid enlargement was present. There was no adenopathy. The lungs were normal. The heart was slightly enlarged to percussion and a soft apical systolic murmur was present. The pulse rate was 72. Blood pressure was 116 systolic and 70 diastolic. The liver was generally enlarged. The surface was smooth, the edge was felt three fingers breadth below the right costal margin. The spleen was considerably enlarged with the tip also three fingers breadth below the left costal margin. The splenic notch was readily felt and the spleen was slightly tender. Neurological examination was normal.

The patient was admitted to Bryan Memorial Hospital on July 13, 1949 for further study. The following pertinent determinations were made:

Urine, normal; hemoglobin, 6.9 gms.; erythrocytes, 2.3 million; leucocytes, 1,450 per cubic mm. The differential: Segmented 24; monocytes 2; lymphocytes 68; eosinophiles 6. Platelet count 22,000. Venous coagulation time 5.3 minutes. Vandenberg indirect .1 mgm %. Serum bilirubin 6 mgm %. Fragility test was normal. Cephalin flocculation test 3 plus.

Study of the peripheral blood smear by Dr. Frank Tanner of Lincoln, showed severe anemia with relative normocytic, hypochromic red blood cells. There was definite leukopenia with relative lymphocytosis and rare nucleated red blood cells. Study of the sternal bone marrow indicated a toxic depression of granulocytes of undetermined etiology. The patient received several transfusions with gratifying response and was discharged from the hospital much improved.

At this time it was felt that the most likely diagnosis was aplastic anemia.

She was re-admitted on September 22, 1949 because of virus pneumonia. At this time her hemoglobin was 6 gms. WBC 1,100 with 70% lymphocytes, 8% band forms, and 10% segmented forms. The platelet count was 46,000. The patient had a very stormy course but with the aid of frequent transfusions she recovered and was discharged in fair condition at the end of three weeks. Her subsequent course was characterized by frequent infections resulting in cellulitis, adenitis and abscesses on various parts of the body. Frequent transfusions were required—a total of 15 had been given up to the time of her last hospital admission. The patient seemed to be receiving decreasing benefit from the transfusions. The blood count would remain elevated for only a short time and there was increasingly severe reactions to the transfusions. The most striking feature of the blood picture was the increasingly severe leukopenia and persisting thrombocytopenia.

The patient was admitted to the hospital eight times for treatment and diagnostic studies prior to her final admission. The spleen had increased considerably in size over a period of several months. On June 2, the patient's hemoglobin stood at 5.6 gms. and the leucocytes had fallen to 850. In spite of two transfusions on June 8 the leucocyte count had fallen to 500. The hemoglobin had risen only to 6.7 gms. Since the leucocytes disappeared so rapidly from the blood stream following transfusions, and since there was a poor response of the other blood elements following transfusions, it seemed highly probable that we were dealing with a hypersplenism. Accordingly, following several more transfusions, a splenectomy was performed by Dr. J. S. Welch on June 16, 1950. Whereas the patient's course pre-operatively had been moderately febrile, following surgery the temperature fell to normal and did not rise at any time above normal. Convalescence was entirely uneventful. On the day following surgery, the erythrocyte count was 4.3 million, the leucocyte count 1,150, and the platelet, 110 thousand.

Pathological report by Dr. Tanner showed the spleen to be enlarged to 620 gms. Histologically it showed a mild congestive splenomegaly and changes consistent with pan-hematopenia.

Following surgery the patient became considerably stronger and her endurance was much better. She was able to be moderately active. She had no further infections of any consequence. She did have some arthralgic pain. Studies of the blood showed a slow but continuing rise in the leucocyte count although the neutropenia persisted. The hemoglobin has been fairly well maintained standing at 10.4 gms. on February 12, 1951. The leucocyte count on this date was 4,250, and the platelet count 85,680.

Prior to splenectomy the patient was forced to live the life of a chronic invalid, but since this procedure she has been able to lead a fairly normal and moderately active existence.

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The American Academy of General Practice

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Nebraska physicians are showing much interest in the recently founded Academy of General Practice. Our friends in the various specialty groups are showing as much interest in the Academy as the men in general practice. It may be of general interest to the medical profession in Nebraska to try and answer some of the questions about the Academy that we are most frequently asked.

The American Academy of General Practice was founded only four years ago, June 1947. Today there are chapters in all forty-eight states, District of Columbia and Hawaii. The total membership is over 14,500. The Nebraska chapter was organized in May 1948, and has over 200 members at the present time.

The Academy was organized by a group of men firmly convinced that General Practice is the backbone of the finest medical system the world has ever known and that general practice is economically and medically the soundest means of distributing care to the American people. The family doctor serving as a family confident and medical advisor, treating those conditions he was ably qualified to treat and selecting for the more difficult conditions a man who had developed special abilities in that particular condition, working together with the specialists has brought to the American people the finest and best medical care in the world. They believed that the fine traditions in medicine could not be preserved and that medical science and art could not be advanced to the highest degree without the organized effort, progress and advancement of the general practitioners.

The first and chief objective of the Academy of General Practice is to promote and maintain high standards of the general practice of medicine and surgery.

Years ago various groups of specialists created their own programs for the improvement of standards in their respective groups. No outside group could do this for them.

The same is true of general practice. It is up to the general practitioners to raise their standards, through self improvement, if they are to command the respect of the public and the esteem in the profession.

To improve the quality of general practice it is necessary that increased emphasis be placed on broad clinical training in the medical school curriculum. It is also necessary that facilities for post graduate education for general practitioners be greatly expanded. These goals represent one of the chief problems the Academy is working on at the present time.

We are frequently asked the relationship between the American Medical Association and the Academy of General Practice. The Academy recognizes the American Medical Assoiation as the parent organization, representing all the branches of medicine and the entire medical profession in America.

In its endeavors to improve the quality of general medical and surgical practice the Academy intends to work closely with the council on Medical Education and Hospitals, the committee on Rural Health, and the council on Medical Service, as well as the other councils and bureaus of the American Medical Association. The Academy supports the American Medical Association in its high ideals and also supports and cooperates with every other group whose aims are unselfish and for the best interests of individual and public health.

Another question asked by both general men and those in the specialties is, "Does the Academy advocate that all general practitioners be permitted to perform surgery in all hospitals?" The answer is quoted from the Academy literature, "No. The Academy recommends that proper requirements be maintained for staff privileges in all hospitals. It recommends that hospital privileges be extended to all licensed physicians on the basis of competency. Specifically, the Academy will do all in its power to assure that every competent general practitioner shall have equal opportunity with specialists to qualify for hospital privileges.

"The Academy endorses official actions taken by the American Medical Association, the American Board of Surgery, and other interested organizations opposing any hospital regulations which confine staff membership or the right to perform certain medical and surgical procedures to specialists who have been certified by the respective specialist boards.

"The Academy believes that integration of competent general practitioners into hospital staffs is of prime importance to both the public and the profession."

In time of illness or injury, most people want a family physician to care for them who will call for special assistance when it is indicated. To properly fill this role of family doctor the general practitioner must have access to hospitals and all the special equipment and assistance available in these modern institutions.

For several decades there has been a tendency to set up restrictions that have limited to specialists the practice of medicine in hospitals. With the public, the medical profession is now becoming aware of the paradox in such a situation. Steps are being taken to correct it. The American Medical Association, the American College of Surgeons, and specialist organizations have passed resolutions recommending that general practice departments be established and many articles have been published on integrating the general practitioner into the hospital staff and awarding him hospital privileges based on his individually demonstrated ability. While hospital privileges have been no problem to the general practitioner in the smaller cities and rural areas, it has been a vital problem to the family doctors in our larger cities.

The various professional and specialty organizations in the country have shown much interest in the Academy's idea of requiring that all active memberships terminate at the end of three years and that to be eligible for continued membership, a member must have spent a minimum of 150 hours during this three year period in post graduate training. It is a magnificent and honest effort for any organization to impose upon its membership a demand and a responsibility to continue education and training to retain membership.

To meet the Academys requirements, 100 hours credit may be obtained by attendance at hospital staff meetings, county, district, state and national scientific medical meetings, and clinical pathological conferences on an hour for hour basis. The remaining 50 hours required must be obtained in attendance at formal post graduate courses, given at or sponsored by medical schools or institutions approved by Council on Medical Education and Hospitals of the American Medical Association for graduate medical education.

The University of Nebraska College of Medicine and the Creighton University School of Medicine both offer post graduate and refresher courses for practicing physicians that are approved for formal post graduate training. The Omaha-Mid-West clinical society presents annually a five day post graduate meeting that is also accredited for formal post graduate training. A list of the approved post graduate courses given throughout the country may be obtained by writing to the American Academy of General Practice, Broadway at 34th Street, Kansas City, Missouri.

To be eligible for membership in the Academy of General Practice a candidate must be of high moral, professional and ethical character, have a sincere interest in his patients, and a credit to the community in which he practices. He must be a member in good standing in his county and state medical society and a member of the American Medical Association. He must be a graduate of an approved medical school, have satisfactory internship training, and have continued his medical advancement and service to his patients by post graduate training.

For those older men who may not be able to fulfill to the letter the requirements as pertain to internship training, but have more than fulfilled them by years of experience, study and continued interest in attending scientific medical meetings, the board of directors by vote may waive that requirement.

It was said by Osler that "the public bases its estimate of the medical profession on its opinion of the family physician, who is the yardstick by which medical care is measured. By elevating the status and dignity of the general practitioner, we elevate the status and dignity of American medicine as a whole."

One wonders why a movement by and for general practitioners through a national scientific organization of their own, based on the premise that advancement in general practice will benefit all the people and the entire medical profession, was not initiated years ago.

NEBRASKA GENERAL HOSPITALS THAT REPORTED AN OPERATING DEPARTMENT OF GENERAL PRACTICE IN 1950

CITY AND HOSPITAL	Type of Control	Number of Beds
Ainsworth		
Ainsworth Clinic and Hospital	Part.	28
Alliance		
St. Joseph's Hospital	Church	105
Auburn		
Tushla General Hospital	Indiv.	15
Bassett		
Bassett Hospital	Part.	26
Beatrice		
Mennonite Deaconness Home & Hosp.	Church	32
Cambridge		
Republican Valley Hospital	Indiv.	20
Columbus		
St. Mary Hospital	Church	138
Fairbury		
Fairbury Clinic and Hospital	Part.	8
Falls City		
Our Lady of Perpetual Help Hosp.	Church	26
Fremont		
Dodge County Community Hospital	County	75
Genoa		
Genoa Hospital	Indiv.	12
Grand Island		
St. Francis Hospital	Church	150
Hastings		
Mary Lanning Memorial Hospital	N P Assn.	138
Holdrege		
Brewster Hospital	Corp.	60
Holdrege Hospital	Indiv.	22
Lincoln		
Bryan Memorial Hospital	Church	135
Lincoln General Hospital	N P Assn.	183
St. Elizabeth Hospital	Church	220
McCook		
St. Catherine of Sienna Hospital	Church	100
Nebraska City		
St. Marys Hospital	Church	60
Norfolk		
Our Lady of Lourdes Hospital	Church	67
Oakland		
Oakland Memorial Hospital	Church	24
Omaha		
Creighton Memorial St. Josephs Hospital	Church	450
Doctors Hospital	N P Assn.	105
Douglas County Hospital	County	300
Immanuel Deaconness Hospital	Church	123
Lutheran Hospital	Church	139
Nebraska Methodist Hospital	Church	174
St. Catherines Hospital	Church	165
Osmond		
St. Joseph Hospital	Church	18
Scottsbluff		
West Nebraska Methodist Hospital	Church	94
Stratton		
Dr. Stewarts Private Hospital	Indiv.	14
Sutherland		
Sutherland Hospital	N P Assn.	19
Tecumseh		
Tecumseh Hospital	Indiv.	13
Valentine		
Valentine General Hospital	Indiv.	25
Total number of beds		3,283

There was a total of 98 registered general hospitals, of which 35 hospitals, or 35.7%, reported a general practice department in operation.

Some Public Health Aspects of Water Impoundment

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Of appreciable interest to those concerned with public health in Nebraska are certain potentialities inherent in current developments taking place in the Missouri River Basin. Irrigation will probably reduce the size of farms and increase the density of rural populations. Fishing, boating, and camping activities will undoubtedly draw large numbers of both rural and urban people to the large reservoirs designed for irrigation and flood control. In a heretofore relatively dry state these increased water areas, and more people in contact with them, may, for all that is known, give rise to several problems and its is felt that everything possible should be done to prevent those we recognize. Future happenings cannot be reliably predicted. Construction, however, should be carried out so as to give reasonable protection against forseeable potential hazards.

Certain diseases are primarily associated with water areas, since they are transmitted by insect vectors, such as mosquitoes, which develop in or near the water. Among such diseases, malaria and the viral encephalitides have long been problems. Another group of diseases which may become a problem in the irrigated regions are of intestinal pathogens such as typhoid fever, bacillary dysentary, amoebic dysentary, and others which may find their way to new hosts through polluted water used to irrigate crops. The Health Department Laboratory is at present investigating the incidence of such pathogens in an established irrigation area in an attempt to evaluate the danger from this source.

At the present time there is virtually no malaria problem within the state, notably because we lack the two prime requisites, a large population of infected humans in contact with numerous anopheles mosquitoes. We do, however, have in certain sections of the state, mosquitoes capable of transmitting malaria, if the occasion should present itself. Climatic factors tend to reduce the chance that Nebraska will ever be faced with a serious malaria problem comparable to that of some of the southern states.

In the case of viral encephalitides, Nebraska is not so fortunate since they are present and have been a problem with the state for many years. Viral encephalitides, such as St. Louis type, Western Equine, and Eastern Equine Encephalitis, are diseases caused by known viruses which have a primary affinity for the central nervous system. These viruses have been discovered and their mode of transmission is partly known but there are others, including poliomyelitis, which are not as well understood.

The St. Louis type and Western Equine Encephalitis are endemic in Nebraska and we have undergone one severe epidemic in the summer of 1941. According to "Public Health Reports" there were 565 reported cases of encephalitis in Nebraska in the period from 1930 to 1948, with an average mortality of 35%, or 198 deaths. On a yearly basis, reported cases ranged from 0 to 366, with most years showing from 3 to 25 cases. State Health Department records show 296 cases reported for the period of June 20 to September 9, 1941, an epidemic year. Fatalities numbered 47 in this period.

These figures are probably considerably lower than the actual incidence due to the difficulty of diagnosis of virus diseases and the fact that many cases are mild and are therefore never diagnosed. Studies conducted by the Federal Government show that many individuals exhibit positive serological reactions when their blood is tested for encephalitis even though they have no history of illness with the disease. For accurate diagnosis, special serological tests, not now adequately available in the state, are required. Without these special tests it is easy to confuse encephalitis with poliomyelitis since the symptoms are similar.

The accompanying tables from the State Health Department records show an interesting trend in diagnosis of these two diseases.

Deaths are considered a more reliable index of incidence of virus diseases than clinical diagnosis.

From the table it seems apparent that differential diagnosis is difficult on the clinical level and that many cases are missed and other diseases are being confused with these two.

There is no known specific treatment for encephalitis. (A possible exception is immune serum used within 24 hours of the onset of the disease.)

POLIOMYELITIS

	Cases Reported	Deaths	Est.*
1940	184	22	110
1941	29	11	55
1942	142	27	135
1943	144	21	105
1944	84	10	50
1945	120	10	50
1946	645	52	260
1947	210	18	90
1948	717	28	140
1949	681	51	255
1950	457	--	--

ENCEPHALITIS

	Cases Reported	Deaths	Est.**
1940	7	8	23
1941	296	47	134
1942	5	3	8
1943	3	4	12
1944	0	5	14
1945	5	9	26
1946	17	3	8
1947	20	6	16
1948	13	5	14
1949	5	7	20
1950	1	--	--

*—Estimated on a basis of 20% fatality.
**—Estimated on a basis of 35% fatality.
(Averages from U.S.P.H.S. Records)

Prophylactic measures, other than preventing the bite of mosquitoes have not been developed to date.

According to the United States Public Health Service the mechanism of infection and transmission of virus encephalitis seems to occur in this manner: blood sucking mites, parasitic on birds, domestic fowl, and other reservoir hosts, serve as a permanent reservoir. Viruses are maintained from year to year by transovarial passage, or in overwintering populations of infested mites. These parasites initially infect their hosts but host to host infection is largely completed by culicine mosquitoes.

The main reservoir hosts reported by Federal and State Health workers are the horse, cow, pig, and other domestic mammals, as well as domestic fowl, especially chickens, and wild birds and mammals Specific viruses vary somewhat in their choice of reservoir hosts. Among those reported for Western Equine type are deer, prairie chicken, mourning dove, meadowlark, wild rats, mice and dogs. St. Louis type has been found in the meadowlark, woodpeckers, jackrabbits, red foxes, and squirrels.

According to the United States Public Health Service Communicable Disease Center, the list of known vectors of viral encephalitis occuring in Nebraska include the following species of mosquitoes: Aedes dorsalis, nigromaculatus, vexans, and triseriatus; Culex pipiens, restauns, salinarius, and tarsalis; Culiseta incidens and inornata; and Mansonia pertubans.

Other Nebraska insects capable of encephalitis transmission include the tick, Dermacentor Andersonii; the bug, Triatoma sanguisuga; the common chicken mite, Dermonyssus gallinae, and Liponyssus sylviarum, Liponyssys bursa, and Emonocanthus.

Authorities consider the mosquitoes, Culex tarsalis and Culex pipiens, and the tick Dermancentor Andersonii as the most important vectors for human infection. These two mosquitoes are the most abundant species in Nebraska.

As mosquito breeding areas increase, due to water development the population of mosquitoes will probably increase and the population balance be tipped to favor an increased number of infected mosquitoes and wider distribution of these. These mosquitoes in turn, infect more reservoir hosts which means more infected mosquitoes and increases the probability of human infection. There is little chance of breaking this ascending spiral at the reservoir hosts since a high percentage of them do not die from the infection and most of them do not even appear sick. The main point of attach appears to be the vectors. When mosquito numbers decline due to natural factors or human control measures the possibility of infective mosquitoes being present in numbers large enough to maintain reservoir hosts and thus maintain the infection is lessened, and human cases tend to disappear or be greatly reduced. It is logical therefore, to reduce present mosquito breeding areas to a minimum and prevent any new ones from developing.

SUMMARY

1. The new water areas to be developed in the Missouri River Basin Program may give rise to several public health problems and it is deemed advisable to prevent these problems, wherever possible, before they arise.

2. Pollution with human excreta should not be permitted where water is to be used for irrigation purposes in order to prevent the spread of intestinal pathogens, both bacterial and parasitic.

3. It is anticipated that the most important public health problems will be with the insect borne diseases such as malaria and virus encephalitis.

4. Malaria will not be a major factor in the near future but encephalitis presents a more serious threat since it is endemic in the state and the vectors are numerous.

5. Complete accurate records of the incidence of encephalitis in the state are lacking because of the difficulty of clinical diagnosis and insufficient laboratory facilities in the state. Such laboratory equipment and personnel as are needed for diagnosis of virus diseases should be available for the use of all the physicians in the state.

6. Since there are no practical treatments for encephalitis it is important to apply any prophylactic measures that are available. The main prophylactic measure is the prevention of bites of infected insects, through effective insect control.

7. Since the insects which transmit encephalitis are primarily of aquatic origin, control measures should be concerned with eradication of existing water habitats and prevention of new ones on the reservoirs and irrigation areas to be built. Control measures may include spreading of insecticides over breeding areas, removing emergent vegetation and drift and floatage from ponds, reservoirs and other surface waters, and in extreme cases drainage of the offending area. Special control activities may be called for in areas from which cases are reported.

8. The State Department of Health has under consideration a set of Rules and Regulations designed to minimize mosquito breeding areas in new developments in the State.

Tuberculosis Abstracts

SPONTANEOUS PNEUMOTHORAX—CONTRAST OF THE BENIGN IDOPATHIC AND THE TUBERCULOUS TYPES

Spontaneous pneumothorax has been known to physicians for many years. The dramatic picture of sudden unilateral chest pain with dyspnea and the finding of a collapsed lung on physical examination and chest roentgenogram are easily recognized. Although it was once believed that all spontaneous pneumothoraces were tuberculous, it has been shown that spontaneous pneumothorax may be produced by diseases such as bacterial pneumonia and may occur in apparently healthy individuals. It is important to differentiate spontaneous pneumothorax caused by tuberculosis from that occurring in the healthy, because of the differences in treatment and prognosis.

The exact frequencies of benign idiopathic spontaneous pneumothorax and tuberculous pneumothorax are difficult to determine. The former entity is often unrecognized as such and wrongly diagnosed as tuberculosis. A physician in a tuberculosis sanatorium would be likely to see more cases of tuberculous spontaneous pneumothorax, whereas one in general practice would see more cases of benign idiopathic spontaneous pneumothorax.

At the Birmingham Veterans Administration Hospital, the Thoracic Service cares for patients with both tuberculous and nontuberculous disease. In a two-year period, there have been 41 cases of benign idiopathic spontaneous pneumothorax but only 10 cases of tuberculous spontaneous pneumothorax. To contrast benign idiopathic spontaneous pneumothorax (which occurs in apparently healthy individuals) and tuberculous spontaneous pneumothorax (which occurs in patients with pulmonary tuberculosis), our data, based on 76 cases of the former and 35 patients with the latter, are presented.

I. BENIGN SPONTANEOUS PNEUMOTHORAX

In 1943 the United States Army had 873 hospital admissions for benign idiopathic spontaneous pneumothorax. In our series the ages of the patients varied from 18 to 62 years of age with almost 50 per cent between 20 and 30 years. Males are more frequently affected, in a ratio of about five to one. Each side of the chest is equally involved. The time necessary for re-expansion of the collapsed lung varies greatly. In almost 70 per cent of the patients it was seven weeks or less.

The etiology is unknown. The patients are apparently healthy but usually underweight and never obese. A very few have a history of bronchial asthma, but none had had an asthmatic attack at the onset of the spontaneous pneumothorax. Spontaneous pneumothorax has no relation to effort but chest pain, usually described as "sharp" and cutting," is almost always present on the affected side. Frequently the pain was pleuritic and lasted from one to four days. However, benign idiopathic spontaneous pneumothorax may be completely asymptomatic. Dyspnea was noted in 83 per cent of our patients and cyanosis was found in eight per cent.

Patients with benign idiopathic spontaneous pneumothorax do not reveal lateral pleural adhesions on the chest roentgenogram in our experience. Only four had fluid significantly above the level of the diaphragm, and in all of these cases aspiration revealed pure bloody fluid. All other patients with benign spontaneous pneumothorax had either no fluid or fluid simply filling the costophrenic angle to the level of the diaphragm. Chest roentgenogram in the benign group reveals no pulmonary infiltration either at the time of the lung collapse or later, when the lung is re-expanded.

Only 10 per cent of the patients in this group had fever, and this never lasted more than seven days. The white blood count and the sedimentation rate were normal in 70 per cent of the cases. Twenty per cent of the patients with benign idiopathic spontaneous pneumothorax have a recurrence.

Treatment is symptomatic. The patient is kept at bed rest with bathroom privileges until the collapsed lung has re-expanded to about 80 or 85 per cent of its volume. With 85 per cent re-expansion the patient is more completely ambulated and following complete re-expansion the patient is allowed full activity. Active intervention is required only in those few cases of tension pneumothorax where aspiration of air and the institution of underwater drainage of the pleural cavity may be life saving.

(Continued on page 312)

The Nebraska State Medical Journal

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Subscription $2.50 Per Year. Single Copies 35c Each

The Publication Board does not assume responsibility for opinions expressed in original articles published in this Journal.

Manuscripts should by typewritten, double-spaced, and the original, not the carbon, submitted.

Reprints should be ordered from the printer, The Huse Publishing Co., Norfolk, Nebraska.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

Vol. 36 September No. 9

THE A.M.A. TWELVE POINT PROGRAM

1. Creation of a Federal Department of Health of Cabinet status with a Secretary who is a Doctor of Medicine.
2. Promotion of medical research through a National Science Foundation with grants to private institutions which have facilities and personnel sufficient to carry on qualified research.
3. Further development and wider coverage by voluntary hospital and medical care plans to meet the costs of illness, with extension as rapidly as possible into rural areas.
4. Establishment in each state of a medical care authority to receive and administer funds with proper representation of medical and consumer interest.
5. Encouragement of prompt development of diagnostic facilities, health centers and hospital services, locally originated, for rural and other areas.
6. Establishment of local public health units and services.
7. The development of a program of mental hygiene with aid to mental hygiene clinics in suitable areas.
8. Health education programs administered through suitable state and local health and medical agencies to inform the people of the available facilities and of their own responsibilities in health care.
9. Provision of facilities for care and rehabilitation of the aged and those with chronic disease and various other groups not covered by existing proposals.
10. Integration of veterans' medical care and hospital facilities with other medical care and hospital programs and with the maintenance of high standards of medical care.
11. Greater emphasis on the program of industrial medicine.
12. Adequate support with funds free from political control, domination and regulation of the medical, dental and nursing schools and other institutions necessary for the training of specialized personnel required in the provision and distribution of medical care.

Organization Section

HEART CLINIC DAY

An outstanding meeting on heart disease is being held Thursday, September 20, at the Cornhusker Hotel in Lincoln. On that date, the Nebraska Heart Association is sponsoring Heart Clinic Day, aimed at affording Nebraska physicians a first-hand opportunity to study the newer knowledge of treating cardiac conditions.

The guest faculty will consist of three physicians from the University of Kansas, an internist, surgeon and pediatrician, all of whom have contributed much to the profession's recent advances in handling heart disease. This meeting promises to be one of the finest of its kind to be held in this region in 1951.

Registration starts at 9:30 a.m. on the mezannine floor of the hotel. The program begins at 10 o'clock with a clinic which lasts until noon. Members of the guest faculty will be in charge of the morning clinic. The noon luncheon will be devoted to a round table discussion, with all those present having an opportunity to participate.

During the afternoon program, the guest faculty will present formal papers on many aspects of heart therapy. The evening program will be opened with a dinner. This will be followed by a question and answer period to which the laity will be invited.

All Nebraska physicians are invited to attend this excellent one-day meeting. There is no registration fee. The only costs are for the luncheon and dinner. The officers of the Nebraska Heart Association feel that the program arranged will be stimulating and beneficial to every Nebraska doctor.

MEETING WITH RURAL LEADERS

On July 12, the solution to many of the state's rural health problems came much closer to being realized. At the invitation of the Rural Medical Service Committee, four rural leaders met with the committee on that date to discuss problems facing the rural people.

Meeting with the committee were Mrs. Haven Smith, Chappell, President of the Associated Women of the Nebraska Farm Bureau Federation; Dean William Lambert of the University of Nebraska College of Agriculture; Mr. Charles Marshall, Elmwood, President of the Nebraska Farm Bureau Federation, and Mr. Edward Janike, Acting Director of Agriculture Extension in the state. Each of these leaders expressed a keen desire to cooperate with the medical profession in meeting the health problems of the rural sections.

Dean Lambert said that one of the biggest problems confronting rural people is the question of getting more doctors to practice in their communities. He also felt that they need to be educated on the whole aspect of voluntary health insurance before they will be adequately protected.

Dr. D. B. Steenburg, Aurora, explained that if enough money could be received for the medical schools, more doctors, nurses and technicians could be trained for the rural communities. He pointed out that all citizens—including physicians and rural people—have an equal responsibility in helping the medical schools get the money they need to train more doctors.

Thorough discussion was also given to the value of community health councils in solving local problems. It was pointed out that the councils permit a community to enlist all its resources in the solution of these problems. All agreed that further consideration should be given to their establishment.

Dr. Earl Leininger, Chairman of the Rural Medical Service Committee, appointed the following sub-comittee to study the ways and means of forming such councils: Mrs. Haven Smith, Dr. Charles Ashby, Mr. Edward Janike and Dr. E. G. Brillhart, Chairman.

The most significant thing about the meeting was that it demonstrated rural leaders are anxious to cooperate with the medical profession and have no desire to turn to the federal government for help in solving health problems.

SPEAKERS BUREAU

The Speakers Bureau Committee has sent to each county secretary a directory of physicians who will speak at county society meetings. The purpose of the directory is to aid county secretaries arrange scientific programs.

This directory can be of tremendous help in getting speakers for your county meetings during the fall and winter months ahead. The Speakers Bureau also stated that it will be glad to assist any county society secretary in getting other speakers for their meetings. Call or write, Dr. R. O. Garlinghouse, 921 Stuart Building, Lincoln, if you need some help in setting up a program for either lay or professional groups.

SEPTEMBER CRIPPLED CHILDREN'S CLINIC

Sept. 1—Kearney, Good Samaritan Hospital, Fritz Teal and Paul Morrow.

Sept. 15—Hastings, Mary Lanning Hospital, W. R. Hamsa or L. S. Campbell and E. S. Wegner.

Sept. 29—Broken Bow High School, C. Fred Ferciot or W. W. Bartels and J. A. Henske.

THE OMAHA MID-WEST CLINICAL SOCIETY NINETEENTH ANNUAL ASSEMBLY

October 29, 30, 31, November 1, 2, 1951

Hotel Paxton — Omaha, Nebraska

PARTIAL LIST OF DISTINGUISHED GUESTS

LOUIS H. BAUER, M.D., Hempstead, New York, President-Elect, American Medical Association; Chairman, Board of Trustees, American Medical Association; Secretary General, World Medical Association.

LAWRENCE R. BOIES, M.D., Minneapolis, Minnesota, Clinical Professor of Otolaryngology and Director, Division of Otolaryngology; University of Minnesota Medical School and Graduate School; Director, American Board of Otolaryngology.

EDWARD W. BOLAND, M.D., Los Angeles, California, Assistant Professor of Clinical Medicine, University of Southern California School of Medicine.

HAROLD B. BOYD, M.D., Memphis, Tennessee, Associate Professor of Orthopedic Surgery, University of Tennessee School of Medicine; Secretary, American Academy of Orthopedic Surgeons.

GEORGE CRILE, JR., M.D., Cleveland, Ohio, Surgical Staff, Cleveland Clinic Foundation.

ARTHUR GROLLMAN, M.D., Dallas, Texas, Professor and Chairman of the Department of Experimental Medicine, Southwestern Medical School of the University of Texas.

LOUIS N. KATZ, M.D., Chicago, Illinois, Director, Cardiovascular Department, Michael Reese Hospital; President, American Heart Association.

LOUIS R. LIMARZI, M.D., Chicago, Illinois, Associate Professor of Medicine, University of Illinois College of Medicine; Director of Hematology Clinic, Research and Education Hospitals.

ROLAND P. MACKAY, M.D., Chicago, Illinois, Professor of Neurology, University of Illinois College of Medicine; Director, American Board of Psychiatry and Neurology.

VINCENT J. O'CONNOR, M.D., Chicago, Illinois, Professor and Head of the Department of Urology, Northwestern University Medical School; Chairman, Department of Urology, Wesley Memorial Hospital.

FRANKLIN L. PAYNE, M.D., Philadelphia, Pennsylvania, William Goodell Professor of Obstetrics and Gynecology, University of Pennsylvania.

ISIDOR S. RAVDIN, M.D., Philadelphia, Pennsylvania, John Rhea Barton, Professor of Surgery and Director, Harrison Department of Surgical Research, School of Medicine, University of Pennsylvania; Surgeon-in-Chief, Hospital of the University of Pennsylvania.

MITCHELL I. RUBIN, M.D., Buffalo, New York, Professor and Head of the Department of Pediatrics, University of Buffalo School of Medicine; Chief of Pediatric Service, Children's Hospital of Buffalo.

MAXWELL M. WINTROBE, M.D., Salt Lake City, Utah, Professor of Medicine and Head of the Department; Director of Laboratory for the Study of Hereditary and Metabolic Disorders, University of Utah College of Medicine.

It is believed that the 1951 Annual Assembly of the Omaha Mid-West Clinical Society will rank with the best meetings that we have had during the past nineteen years.

Distinguished guests will present addresses, clinics and round table discussions throughout the five day meeting. On Friday morning four nationally prominent hematologists will take part in a comprehensive discussion of blood dyscrasias.

Diagnosis and Treatment of Dermatologic Diseases, Fractures and Orthopedic Problems, and Interpretation of Roentgenograms are subjects which will be discussed by panel groups composed of members of the Society. In addition members will present a series of lectures on timely subjects.

The scientific, technical and motion picture exhibits will complete the schedule and help to provide full and up to the minute coverage of present day diagnosis and treatment.

A reminder . . . The Annual Assembly of the Omaha Mid-West Clinical Society was the first regional meeting to be given an A rating by the American Academy of General Practice. Attendance at this meeting is accepted for credit toward the fifty hours of formal postgraduate study required every three years for continued membership in the American Academy of General Practice.

May we suggest that you set your schedule so that you can attend the full five days of the Nineteenth Annual Assembly of the Omaha Mid-West Clinical Society, to be held October 29th to November 1st, inclusive, at Hotel Paxton, Omaha, Nebraska.

For further information write to the Omaha Mid-West Clinical Society, 1031 Medical Arts Building, Omaha, Nebraska.

News and Views

Nebraska's allocation from the federal hospital aid fund this year is $607,072. This is based on a national appropriation of $75 million for federal aid for community hospital construction. Last year Nebraska received $772,170 from a federal fund of $85 million, and the preceding year this state received $1,367,926 when the federal fund amounted to $150 million.

Creighton University School of Medicine has a new dean. He is Dr. Frederick G. Gillick, 40, senior surgeon of the National Heart Institute at Bethesda, Md.

Dr. Gillick succeeds Dr. Percy J. Carroll, who served three years.

Dr. Gillick received his M.D. degree from St. Louis University in 1935. He joined the United States Public Health Service in 1942.

Since that time he has served on the faculties of Catholic Universty of California and Georgetown University.

He is married and has four children.

After one complete year of operation the Crete Municipal Hospital has recorded a profit, according to Fred Mildrexler, superintendent.

Mr. Mildrexler said the hospital income for the year totaled $64,256.82, and operating expense was $55,103.95.

During the year the hospital treated 695 patients. There were 179 babies.

—From World-Herald News Service

Physicians in civilian practice in the United States had an average net income of $11,058 before taxes in 1949. And physicians in mediumsized communities fared better financially than their colleagues in the big cities.

These were among the findings reported from a nationwide survey conducted jointly by the department of commerce and the American Medical Association.

Dr. Frank G. Dickinson, director of the AMA's medical economic research bureau, said in a statement in Chicago that the survey was "the best and broadest mail questionnaire income survey ever taken of any profession."

Questionnaires were sent to 125,000 physicians across the nation, with 55,000 replies received.

The survey showed that neurologic surgeons led the field for highest earnings. Their average net income was $28,628. They were followed by pathologists with $22,284, and gynecologists with $19,283.

—The Lincoln Star

Dr. Hugh H. Hussey, Associate Professor of Medicine at Georgetown University, Washington, D.C., has been appointed associate editor of GP, published by the American Academy of General Practice, according to an announcement by Mac F. Cahal, managing publisher, in the August issue of that journal. The announcement pointed out that the rapid growth of the publication during the past year and one-half has thrown a steadily increasing burden on the medical editor, Dr. Walter C. Alvarez.

Dr. Hussey, selected from a wide list of potential candidates, brings to his new post an imposing record of experience in clinical medicine, teaching, writing and editing. He received his M.D. from Georgetown University School of Medicine in 1934 and served his internship and residency at the University Hospital in Washington. In addition to his position as associate professor of medicine on the Georgetown faculty, he has, for some years, served as associate editor of The Medical Annals of the District of Columbia.

Dr. Hussey is author of the section on "Supportive and Symptomatic Therapy," in the medical textbook, Fundamentals of Internal Medicine, now in its third edition. He has also had many clinical papers published in the medical literature.

The following is a list of the registered physical therapists in the State of Nebraska, their addresses and where they are currently working:

ACTIVE MEMBERS

Miss Enid Bailey, Hotel Wellington, Omaha, Visiting Nurses Association of Omaha.

Miss Avis Bishop, 2032 Worthington St., Lincoln, Orthopedic Hospital, Lincoln.

Miss Isadore Brown, 1317 L St., Lincoln, Lincoln General Hospital.

Lt. Lucile Burt, USAFR (WMSC), 3902 Medical Group, SAC, Offutt Air Force Base, Omaha, Offutt Air Force Base.

Miss Florence Case, 1614 West Charles St., Grand Island, St. Francis Hospital, Grand Island.

Mrs. Shirley Demott, 1801 Broadway, Scottsbluff, Hospital at Scottsbluff.

Mrs. Katherine Gaston, 5360 No. 27th St., Omaha.

Mr. Robert Holmes, 2767 Garfield, Lincoln, University of Nebraska, Lincoln.

Mrs. Jeanne Hughes, 255 So. Oak, Grand Island.

Mrs. Mary Lindball, 3604 Grant Street, Omaha, Clarkson Hospital, Omaha.

Mrs. Janet Lytell, 1319 N St., Lincoln, St. Elizabeth Hospital, Lincoln.

Miss Gertrude Mensch, 2311 So. 35th Ave., Omaha, Veterans Hospital, Omaha.

Mr. Wayne Perdue, 4335 Wakely St., Omaha, Offices of Drs. Shrock, Johnson and Waters.

Mr. Dale Renaud, Veterans Hospital, Lincoln, Veterans Hospital, Lincoln.

Miss Lois Schoenberg, Children's Hospital, Omaha, Children's Hospital, Omaha.

Mrs. Joan Cowan, Box 1087, Scottsbluff, Physical Therapist with the schools, Scottsbluff.

Mrs. Elizabeth Soder, 611 No. 42nd St., Omaha, County Hospital, Omaha.

Mr. Raymond Taibl, Department of Public Instruction, Room 354, Capitol Bldg., Lincoln, Director of Special Education.

Miss Beth Taylor, 3127 No. 41st St., Lincoln, Physical Therapist in School for Handicapped Children, Lincoln.

Miss Emma Jane Wilder, Box 34, Kearney, Physical Therapist with the State Medical Clinics.

INACTIVE MEMBERS

Mrs. Dorothy Daniels, 2122 3rd St., Scottsbluff.
Mrs. Evelyn Rossman, 804 Circle N, Hastings.

ASSOCIATE MEMBER

Miss Clara Rausch, 1750 So. 21st St., Lincoln.

The National Gastroenterological Association will hold its Sixteenth Annual Convention and Scientific Sessions at The Drake in Chicago, Illinois, on September 17, 18, 19, 1951.

The program will include a symposium on Peptic Ulcer in which Dr. Andrew C. Ivy of the University of Illinois will present the Physiological Aspects; Dr. David J. Sandweiss of Detroit, Michigan, the Medical Aspects and Dr. Lester R. Dragstedt of Chicago, Illinois, the Surgical Aspects.

There will also be a symposium on the Pancreas, a symposium on Psychosomatic Medicine and a symposium on Carcinoma, and other individual papers.

Immediately following the convention on September 20, 21, 22, 1951, the Association is conducting a course in Postgraduate Gastroenterology at The Drake under the direction of Drs. O. H. Wangensteen, Minneapolis, Minnesota and I. Snapper, New York, N.Y.

Further information concerning the program and details of the course may be obtained by writing to the Secretary, National Gastroenterological Association, 1819 Broadway, New York 23, N.Y.

INVESTIGATION OF FOUNDATIONS IS PROPOSED IN HOUSE RESOLUTION

An investigation and study of educational and philanthropic foundations to determine whether they are using their resources for "un-American and subversive activities" is proposed in a resolution by Rep. Eugene Cox (D.-Ga.). The measure (H. Res. 364) provides for creation of a special 7-man committee. Representative Cox said he was hopeful hearings would start in the fall. He explained that foundations that have restricted themselves to health, medical research and popular culture "have, as a rule, carried on in an admirable fashion." His concern is for those foundations that "have operated in the fields of social reform and international relations."—(Capitol Clinic).

Know Your Blue Shield Plan

During the first six months of this year, Nebraska Blue Cross-Blue Shield Plans paid a total of $1,709,475 to hospitals and physicians for services to members. Blue Cross payments amounted to $961,854 for hospital care received by 16,858 members. Blue Shield payments totaled $747,621 for 24,072 services to members. These figures represent an increase of nearly $258,000 in Blue Cross payments and $230,000 in Blue Shield payments over the amounts paid during the first six months of 1950. It is expected that by the end of the year, benefit payments made by the two plans will exceed 3½ million dollars.

The mid-year financial reports of Blue Cross and Blue Shield indicate that both plans continue to return high percentages of the income dollar to members in the form of benefits. Blue Cross paid 87.94 cents of each dollar in benefits. Administrative expenses amounted to 10.04, and 2.02 went to reserves. Blue Shield benefit payments totaled 82.45 cents of the income dollar, with 10.78 and 6.77 for administration costs and reserves, respectively.

Listed below are some of the features of Blue Cross-Blue Shield protection which physicians may wish to mention when their patients ask for advice about prepaid health care:

1. Public Acceptance: Blue Cross serves more than 41 million people and more than 20 million are enrolled in Blue Shield.

2. Non-Profit Operation: Because these plans operate in the public interest, all income, aside from nominal administrative cost and reserves, is paid to hospitals and doctors for their services to members.

3. Family Protection: All eligible family dependents receive full contract benefits.

4. Protection Everywhere: Contract benefits are provided wherever the member receives care.

5. Continuous Protection: Members may keep their membership after they leave groups, reach age 65, or retire.

6. Professional Endorsement: The hospitals organized and endorse Blue Cross. Blue Shield, organized by physicians, has the endorsement of the medical profession.

7. Low Cost: Blue Cross-Blue Shield protection is provided to entire families at a cost of less than 22 cents per day. Dollar for dollar, it is the best buy in health care.

A.M.A. COMMITTEE ADOPTS BLUE SHIELD RESOLUTIONS

Among the resolutions presented to the House of Delegates of the American Medical Association at the Annual Session in Atlantic City, N.J., June 11-15, 1951, were the following:

WHEREAS, Certain organized medical societies throughout the country have caused to be created seventy-our (74) non-profit voluntary prepayment plans known collectively as the Blue Shield plans to meet the costs of medical care for major or serious illnesses; and

WHEREAS, This Blue Shield movement has met with widespread public approval now covering over 20 million people, having grown in size 35 per cent in the past year; and

WHEREAS, Over 100,000 practicing physicians are participating physicians in these plans; and

WHEREAS, Over 725 practicing physicians on the various governing boards of the Blue Shield plans are giving their time and counsel to direct and further increase the usefulness of these plans in the public interest; and

WHEREAS, In this House of Delegates of the American Medical Association nearly one-third of the members are serving not only organized medicine but also serving in official policy-shaping capacity for the Blue Shield plans; therefore be it

RESOLVED, That the House of Delegates of the American Medical Association in annual session assembled does herby express its appreciation and extend its congratulations to the several sponsoring medical societies for the constructive, positive program known as the Blue Shield Plans that they have so admirably and wisely initiated and continue to develop in the public interest; and be it further

RESOLVED, That this House of Delegates expresses itself as cognizant of the responsibility these societies have unselfishly assumed in administering a great public trust in behalf of the medical profession and for the benefit of the American people."

These resolutions were presented by Dr. R. L. Novy, Michigan, and were referred to the Reference Committee on Insurance and Medical Service. Dr. William R. Brooksher, Chairman, submitted the following report, which was duly adopted:

"Your committee recommends approval of this resolution with amendments to provide that approval, commendation and congratulations be extended not only to the medical societies sponsoring Blue Shield Medical Care Plans but to those medical societies that sponsor other plans for the provision of the cost of medical care for major and serious illnesses." (The above resolutions and committee report are quoted from the Journal of the American Medical Association, June 30, 1951).

NEBRASKA STATE MEDICAL SERVICE

BALANCE SHEET

June 30, 1951

Assets:		
Cash in banks	$206,857.12	
Premiums in process of collection	23.473.50	
U. S. Bonds	384.950.00	
Accrued interest on U.S. Bonds	3,056.05	
Total Assets		$618.337.17
Liabilities, Reserves and Surplus:		
Accounts Payable, Blue Cross	$ 13,348.09	
Accounts Payable, Monthly Invoices	421.35	
Accrued Payroll Taxes	228.90	
Claims Reported but Unpaid (Pending)	10.237.00	
Unearned Premiums	119,290.31	
Total Liabilities		$143.525.65
Reserves for:		
Unreported Claims	$128,133.50	
Maternity Care	179,487.00	
Bonuses	1,550.00	
Collection Losses	1,500.00	
Premium Tax Liability	3.545.12	
Total Reserves		$314.215.62
Unassigned Surplus:		$160,595.90
Total Liabilities, Reserves, Surplus		$618.337.17

STATEMENT OF INCOME AND EXPENSE

June, 1951

Income:	June	6 Months to Date
Dues	$156.795.00	$897.539.05
Enrollment Fees	2.219.00	9.200.00
Total Earned Income	$159,014.00	$906.739.05
Claim Expense:		
Claims Paid	$131,370.00	$739,711.75
Less—		
Unreported, 5-31-51	129,086.15	128.517.12
Pending, 5-31-51	6.599.00	1,944.00
Plus—		
Unreported, 6-30-51	128.133.50	128.133.50
Pending, 6-30-51	10.237.00	10,237.00
Total Claims Incurred	$134,055.35	$747.621.13

Administrative Expense:		
Collection Expense	$ 6.50	$ 219.53
Professional—Medical	250.00	1,500.00
Auditing Expense	--------	840.00
Advertising—B.S. Only	43.50	449.23
Printing	367.85	4,910.44
Office Supplies	--------	23.25
Postage	--------	134.00
Dues	157.97	929.32
Taxes and Licenses	615.93	4,674.48
Payroll Taxes	6.25	37.50
Payment to B.C.—		
Regular	12,565.07	72,488.88
Advertising	583.02	4,770.43
Bonus Expense	300.00	1,800.00
Conferences and Meetings	281.34	2,368.48
Salary—Secretary	416.66	2,500.00
Miscellaneous	6.50	80.72
Total Administrative Expense	$ 15,600.59	$ 97,726.26
Gain or Loss from Underwriting	$ 9,358.06	$ 61,391.66
Miscellaneous Gain or Loss Items:		
Plus—		
Miscellaneous Income	--------	460.25
Interest on U.S. Bonds	520.84	812.52
Increase or Decrease in Maternity Reserve	198.00	—25,395.30
Net Transfer to Surplus	$ 10,076.90	$ 37,269.13
Surplus, 5-31-51 and 12-31-50	$150,519.00	$123,326.77
Surplus 6-30-51	$160,595.90	$160,595.90

CASE REPORT — JUNE, 1951

Number of Services Rendered	4,445
Females	2,516
Males	1,929
Subscribers	1,514
Dependents	2,931

MEMBERSHIP SUMARY, JUNE, 1951

Groups enrolled during June	47
Groups cancelled during June	24
Number of active groups, July 1, 1951	3,121

	Subscribers	Dependents	Participants
Membership, June 1, 1951	65,031	90,393	155,424
Additions	2,382		
Less Terminations	1,129		
Plus Reinstatements	34		
Net Gain	1,287		
Membership, July 1, 1951	66,318	92,182	158,500

Deaths

William J. Haney, M.D., Omaha. Born in Omaha in 1879. Graduated from Rush Medical College in 1901. Practiced for some time in Chicago and in Mexico. In 1917 he came to Omaha and shortly afterward joined the United States Army in World War I as a captain in the Medical Corps. On his discharge from the army he returned to Omaha and became associated with the late Dr. W. P. Wherry in the practice of Otolaryngology. He joined the faculty of the Medical College of the University of Nebraska where over the years he became Assistant Professor of Otolaryngology. In 1946 he was made assistant Professor Emeritus, a rank he held until his death July 19, 1951. Surviving are his wife, a son, and a daughter.

Joe Morrow, M.D., Seward. Born in Iowa in 1870. Graduated from Eclectic Medical College in Ohio in 1893. Practiced for several years in Garland, Nebraska and in 1903 he located in Seward, where he remained until the time of his death on August 12, 1951. Dr. Morrow was active not only in professional circles but as well in civic and political affairs. At one time he served in the Nebraska Legislature. For several terms he served on the Seward City Council. Surviving are his wife, two brothers, Dr. Burt of Seward and Dr. Milt of Muskogee, Oklahoma.

Earl A. Gullberg, M.D., Osceola, Nebr. Born in 1919. Graduated from Creighton University School of Medicine in 1949. Located in Osceola in July 1950 when he took over the practice of Dr. Donald T. Kelley. Died of hepatic ciorhosis July 19, 1951. Surviving are his wife and three daughters.

Frederick O. Beck, M.D., Omaha. Born in 1883. Graduated from University of Illinois Medical College in 1905. Located in Omaha in 1908. He maintained a busy practice in South Omaha throughout the years, and died of a heart attack in his office August 1 while attending a patient. Dr. Beck was prominent in professional and civic work, having served in the Council of the Omaha-Douglas County Medical Society. He was president of the Board of Directors of the Omaha-Douglas County Central Health Service during its existence from 1935 to 1942. He served as president of the Family Welfare Association of Omaha. The only immediate survivor is a brother living in Council Bluffs.

Human Interest Tales

Communications bearing human appeal are solicited. They should be addressed to The Editor, Nebraska State Medical Journal, 111 So. 39th, Omaha.

Dr. Floyd J. Walter of Chambers has moved to Detroit.

Dr. Murray E. Markley, formerly of Wahoo, has moved to North Loup.

Dr. B. A. Dennis of McCook is deputy grand exalted ruler of the Elks.

Dr. Robert E. Benner of Scribner has joined the Ogallala Medical Clinic.

Dr. and Mrs. Robert T. Jones of McCook are vacationing in East Canada.

Dr. and Mrs. William P. Yoachim of Fairbury vacationed in Canada in July.

Dr. M. P. Williams has been installed as president of the Ashland Rotary Club.

Dr. E. L. MacQuiddy is convalescing from a major operation in Methodist Hospital in Omaha.

Dr. Loran C. Grubbs has become associated with Dr. L. E. Hudgel in Scottsbluff.

The new associate of Dr. A. J. Schwedhelm of Norfolk, is Dr. Francis A. Bulawa.

Dr. Elmer C. McAleer, formerly of Papillion and Auburn, has moved to South Omaha.

Dr. H. D. Myers of Schuyler attended the Rocky Mountain Cancer Conference in Denver in July.

A former Lincoln physician, Dr. Albert Coates was drowned while fishing in Henry's lake in eastern Idaho.

Dr. George Underwood of Lincoln was re-elected president of the city-county health board at a recent meeting.

After several weeks on vacation in California, Dr. L. J. Chadek has returned to his practice at Tecumseh.

Dr. Russell L. Herdener has joined the surgical staff of the Grand Island Veterans Administration Hospital.

Howells' new doctor is Robert McGee, a graduate from the University of Nebraska College of Medicine.

Named assistant medical director for Frigidaire at Dayton, Ohio, is Dr. Jack Colglazier, formerly of Falls City, Nebr.

Dr. Mason E. Lathrop, Wahoo, has been elected chief of the medical staff of the new Saunders County Community Hospital.

Dr. James T. Maxwell of Omaha, has returned from a trip to the interior of Africa, where he filmed natives and wild animals.

Dr. Roy Matson of Wayne will have as his associate, Dr. Paul Cranz, who has just finished his internship in San Francisco.

Hay Springs has lost its physician. Dr. N. B. Halley left to become a resident at St. Joseph's Hospital in Chicago.

Drs. William R. Hamsa and Louis S. Campbell of Omaha have a new associate. He is Dr. Dwight W. Burney, a native of Hartington.

Dr. Floyd Shiffermiller has joined the Ainsworth Clinic. Dr. Shiffermiller is a graduate from the University of Nebraska School of Medicine.

Drs. Vern F. Deyke and Ervin N. Heiser have become associated with Drs. M. C. James, J. E. Meyer and E. G. Brillhart at Columbus, Nebraska.

Dr. Paul Bancroft, physician and president of Kearney Rotary Club, gave a review of his observations at the Atlantic City convention, at their July meeting.

Dr. A. E. Stuart of Cedar Bluffs was the first doctor elected a member of the Honorary Emeritus division of the medical staff of the new Saunders County Hospital.

Tyndall's new doctor is Dr. Nicholas Fox. Dr. Fox is a graduate of Creighton University Medical School, and interned at St. Catherine's Hospital in Omaha, Nebraska.

Dr. James Bell spent his leave from the navy in York where he had practiced prior to entering the service. Dr. Bell is a senior grade lieutenant, serving aboard a hospital ship.

Following completion of his residency in Pediatrics at the University and Children's Memorial Hospital, Dr. John F. Leeds of Omaha joined the staff of the Butler Clinic at Hot Springs, S.D.

A former Omahan, Colonel Thomas J. Hartford, heads the Tripler Army Hospital at Monalua, Hawaii. Colonel Hartford is a graduate of the University of Nebraska College of Medicine.

A reception honoring Major Robert Koefoot, who recently returned from a year's service with the Medical Corps in Korea, was given by Dr. and Mrs. Theodore Koefoot, Sr., in Broken Bow, Nebr.

Word has been received that Dr. J. R. Zastera has been transferred from Tokyo to Kyoto, Japan and assigned to the 141 General Hospital, where he expects to be stationed for 18 months. Dr. Zastera is formerly from Talmage.

Nearly 400 residents of Shubert held a dinner Sunday, July 22nd, honoring Dr. W. C. Shook for 50 years of practice in the Shubert area. The 78-year-old physician, who still holds regular office hours, began serving the community shortly after his graduation from medical college in 1901.

THE ODYSSEY OF MODERN DRUG RESEARCH

Issued by Upjohn the occasion for this book is the opening of the new Upjohn pharmaceutical manufacturing plant which has just been completed. It tells the story of the development of some of the newer drugs and the role that pharmaceutical companies play in the field of medicine.

TUBERCULOSIS ABSTRACTS

(Continued from page 305)

II. TUBERCULOUS SPONTANEOUS PNEUMOTHORAX

Tuberculous spontaneous pneumothorax is usually secondary to sub-pleural caseation with erosion and rupture of the visceral pleura. Air enters the pleural space and the lung on that side collapses. Symptoms vary from none to a sharp, acute, tearing chest pain with dyspnea. Of the 35 patients with tuberculous spontaneous pneumothorax, 25 had sudden pain on the affected side. Since most of these patients were fairly ill with their pulmonary tuberculosis, their pain thresholds may have been elevated. Dyspnea was noted by 27 patients. Examination of the chest roentgen-ray revealed tuberculous infiltration of varying degree but usually far advanced. Lateral pleural adhesions were demonstrable on the chest film in 32 patients, or 91 per cent of the group. Pleural fluid was above the level of the diaphragm in 54 per cent of these patients. Tuberculous spontaneous pneumothorax may affect either side with equal frequency and is not related to effort.

Patients who develop tuberculous spontaneous pneumothorax usually are fairly ill. The sudden onset of a spontaneous pneumothorax, with or without pleural fluid, adds to the patient's respiratory embarrassment and toxemia. Prolonged fever and tachycardia are common. The pleural fluid varied from serous to purulent, and often revealed acid-fast bacilli on concentrate and culture. Of this group, one half had normal sedimentation rates and one half had normal white blood counts with their tuberculous spontaneous pneumothorax. The ages of the group of 35 patients varied from 19 to 70 years. The immediate hospital mortality rate of 29 per cent was caused by both the patient's pulmonary disease and his tuberclous spontaneous pneumothorax. The ultimate mortality rate cannot be stated since most of these patients were transferred to other tuberculosis sanatoria.

Treatment varies with the degree of symptoms. If dyspnea is not severe, no specific therapy is indicated. If a tension pneumothorax is present, an indwelling needle with underwater drainage reduces the increased intrapleural pressure. Management of the pleural effusion varies. Patients with minimal fluid require no thoracentesis. If dyspnea and cyanosis caused by the free pleural fluid are significant, removal is advised. The patient's underlying pulmonary tuberculosis must, of course, be treated.

Benign idiopathic spontaneous pneumothorax and tuberculous spontaneous pneumothorax are two distinct entities with different causes, clinical pictures, and mortality rates. Cases of spontaneous pneumothorax must be carefully observed and the type or cause determined.

Benign idiopathic spontaneous pneumothorax appeared to occur four times as frequently as tuberculous spontaneous pneumothorax.

—Bernard Hyde, M.D., and LeRoy Hyde, M.D., Annuals of Internal Medicine, December, 1950.

Buy U. S. Defense Bonds

The Nebraska State Medical Journal

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

Vol. 36 Norfolk, Nebraska, October, 1951 No. 10

EDITORIAL

A GOOD BEGINNING

Last spring, it will be recalled, our Association carried on an energetic campaign to secure an increased biennial allotment for the University of Nebraska. Our interest was concentrated on the needs of the College of Medicine. The campaign was successful, we felt, when following the new appropriations by the Legislature the Board of Regents publicly announced its intention to allow $2,960,000 for the Medical College for the present biennium. This sum, it was understood would constitute a good beginning toward a program to bring the College to a level with other progressive medical schools in our immediate area of Middle West. It had been pointed out that budgetary restrictions had retarded the growth of the institution to a degree which seriously endangered its status with the accrediting agencies. The College had been criticized over the disproportion between facilities needed and those available for good teaching.

We do not know of any public releases on changes as a result of the improvement allotment. However, we understand that much progress already is in evidence: Remodelling of the obstetrical department and construction of a new and larger nursery with modern equipment for the care of premature infants is about to begin. This project will not only add additional beds, but it will afford improvements in instruction on the care of the newborn. Under present condition of overcrowding undergraduate bedside teaching would constitute a menace to the nursery. Of greatest encouragement are prospects for a third wing and a psychiatric unit to be constructed on the campus in Omaha in the near future. The third wing, it is understood, will add around 80 beds for general use. The psychiatric unit will provide a satisfactory number of beds for teaching purposes and together with its out-patient service including a pediatric division, will, it is hoped fill a long delayed need in this important field of instruction.

The increased budget together with a $15,000 grant from the National Fund for Medical Education has also made it possible to obtain part time personnel in several clinical departments to augment the teaching program on the wards and in the dispensary. Under the new system students will receive a great deal of individual instruction and guidance in their study of cases assigned to them.

Of particular significance to the physician in this state is the contemplated program of organized refresher course to be made available for postgraduate study. At the present time, with the co-sponsorship of the Nebraska State Department of Health and its Maternal and Child Health Division, the plans for a two-day refresher course in obstetrics and pediatrics to be offered each month during the academic year, are already completed with the first course in pediatrics scheduled for the last week in November.

In our opinion this is indeed an excellent beginning. With continuing progress at this rate the people of Nebraska before too long, we hope, will be justifiably proud of their medical college. For its part, the medical profession ever conscious of the importance of good medical education, will continue in its strivings for the best in medicine and medical service in Nebraska.

NO FAMILY CAN AFFORD TO BE WITHOUT HEALTH INSURANCE

In the recent issue of "Chatter" a four page brochure issued periodically by Nebraska Blue Cross-Blue Shield there is the story of Janet Zents, a three and one-half year old

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girl who in the past 18 months was admitted to the Children's Memorial Hospital in Omaha nineteen different times. The hospital cost thus far amounts to $1,152.15 and the physicians fees $307.00, a total of $1,459.15. This we realize is one of the unusual cases insofar as costs per member is concerned, and only illustrates the logic of the health insurance principle that the many who are well, pay trifling sums for the few who absorb the large accumulations in premiums. We do not know the family, but it is not too hazardous a guess on what this sum would mean to their budget if they had no coverage. The Zents are fortunate, if we can designate any phase of sickness by that terminology, in that they used the foresight of having acquired timely protection against an uncalculated yet probable risk of medical and hospital costs.

If all our patients were as practical there would be no point in these remarks. The fact is that a relatively small percentage of people, and particularly those who need insurance most are realistic enough to even think of this form of budget protection until they come face to face with the registrar on admission to the hospital. Even in an era when a ward bed could be had at $2.50 per day with all the laboratory work at a flat charge of additional two dollars, and medicines free, hospital costs not infrequently absorbed the family savings. With the current hospital charges at $8.50 per bed per day, the average ward rate, we understand, and with extra charges for everything from a piece of gauze and an aspirin tablet on up, the cost of hospitalization and medical fees, in the event of any serious illness constitutes a financial blow for any family with a decent income. To the family with an average income in these days of high cost of living and climbing taxes it may mean bankruptcy.

On many occasions in these pages we have focused attention on the importance of good medical public relations. On the organizational level we have come a long way. It would be impossible at this time to enumerate our activities in this sphere, or to reflect upon their beneficial effects. At this time our only aim is to register a plea to the practicing physician to actively interest himself in this field as an individual. It is to his own advantage to acquaint every one of his patients with the necessity for sickness coverage. As a rule people insured against the cost of illness do not fall for false promises for "free" medical care. Most people like to pay for what they receive, and hospital and medical care would be no exception, if they understood the real problem they face and the ease with which this economic risk could be met.

We contend further that in view of the higher costs of all phases of medical care and hospitalization we are now experiencing, the physician must assume an obligation toward the people under his care in urging them to protect themselves and their families against financial losses, connected with sickness. This does not imply that the doctor consider himself an insurance agent. On the contrary he should act in the spirit of the good physician who aims to preserve the health and welfare of his patient by lessening the burdens which sickness imposes.

The protests of the average bread-winner with a modest income that he cannot afford health insurance can be met in all honesty and sincerety with the axiom that today no family can afford to be without insurance. With the low premium contracts available through Blue Cross-Blue Shield there is no justifiable reason for any family in Nebraska to remain unprotected.

SPECIAL ANNOUNCEMENT

The College of Medicine University of Nebraska announces monthly two-day study sessions throughout the academic year beginning in November. The Department of Obstetrics and Pediatrics will offer courses on rotating basis each month. The aim is to afford the general practitioner through personal conference and bedside clinics, the opportunity to keep abreast with the latest procedures in diagnosis and therapy. Ward rounds and discussions will be conducted by guests with professional rank from the various medical schools in the country.

To afford a maximum of practical individual instruction, classes will be limited to small numbers.

The first course will be given November 19 and 20, 1951 in pediatrics. The class will be limited to ten physicians.

Further information may be obtained by writing to: The Dean, Medical College University of Nebraska, 42nd and Dewey, Omaha, Nebraska.

ORIGINAL ARTICLES

The Recognition and Management of Bronchiectasis*

RICHARD H. OVERHOLT, M.D.**
Boston, Massachusetts

Bronchiectasis causes death via pneumonia, metastatic infection, pulmonary decompensation or right heart failure, but to the patient its threat is more than mortal. The ultimate expression of the disease is unpleasant. The sleep-destroying, strangling, constant cough, and the putrid expulsions lead to a miserable, stinking existence. The inhibitions imposed by these racking, revolting manifestations eventually negate a personality already weakened by fatigue and toxicity.

Since bronchiectasis is neither a public health problem nor the producer of direct and dramatic death, it has not been immortalized in opera, not has it inspired the organization of great national societies dedicated to its investigation and conquest. The general public, although glibly familiar with such medical terminology as hypertension, coronary occlusion, carcinoma, and poliomyelitis, has never heard of bronchiectasis. Even in the medical profession, there is considerable misconception of the distinctly separate etiologies of bronchitis and bronchiectasis; there is no completely satisfactory theory of pathogenesis; and there is still an absurb disparity in the concept of treatment.

One result of inattention is the lack of accurate statistics, but it is certain that bronchiectasis has a greater morbidity and mortality than lung cancer and is not far behind tuberculosis. Perhaps the greatest difference between these two pulmonary disorders and bronchiectasis is that the latter alone can offer the majority of its sufferers a relatively simple, quick, and permanent cure.

The surgical excision of destroyed pulmonary tissue does more than cure. It permits an absolute check on the diagnosis, and a more complete correlation of data. Symptoms, physical findings, abnormal x-ray shadows, functional tests and living pathology can be studied and related as to cause and effect. In fact, each exploration with direct inspection, palpation, tests of inflation and deflation, biopsy and examination of removed diseased tissue add greatly to our total knowledge.

In no field of chest disease has this complete correlation of findings been more beneficial than for that group of patients with structural changes in the bronchial system. These are the patients who "doctor" for months and years for "bronchial trouble." They have a chronic and harassing cough, usually productive of thick sputum; they may rattle or wheeze on exertion; they are subject to frequent colds which settle in the chest; and they may have periods of low-grade fever. Often, pleurisy is associated with exacerbations. They may occasionally have blood-streaked sputum. Some are treated as tuberculosis suspects. Others have been considered allergic and are treated for asthma. This disease is also unique, for it usually starts in childhood or young adult life and neglect leads to progressive changes and disturbances of function in previously uninvolved pulmonary segments. As the disease advances, the affected areas contract and the remaining segments become overstretched. With some segments airless and others suffering from emphysema, pulmonary ventilation and gas interchange is altered. Various degrees of interference with the pulmonary circulation result. In the extreme cases, cor pulmonale develops.

In our Thoracic Clinic from January, 1938, to January, 1951, 860 patients have been studied in whom a diagnosis of bronchiectasis had been made. From this experience, many facts have come to light which have been of help in the management of their problems. I should like to comment upon them in editorial fashion.

1. Thick sputum must have a source.

A chronic cough, productive of thick sputum, indicates that somewhere in the respiratory system there are spaces in which secretions collect, stagnate and concentrate. The reservoir is more apt to be a dilated bronchus than anything else*. A complete and carefully done bronchogram is necessary to find it.

There are only two other places secretions could stagnate:

(a) Secretions may concentrate in the sinuses and descend by way of post-nasal drip. Patients can usually tell whether they simply raise sputum by clearing the throat or whether they "work" to bring it up by coughing. When patients struggle to clear their "bronchial tubes" out in order to improve upon breathing or if there is rattling in the chest or wheezing prior to coughing attacks, the chances are that the secretions have been concentrated within the bronchial system. Sinus disease and bronchiectasis may co-exist. Each may aggravate the other.

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*Read before Annual Convention Nebraska State Medical Association, May, 1951.

**From the Department of Surgery, Tufts College Medical School, Boston, Massachusetts. Member of the Staff of the New England Deaconess Hospital and New England Center Hospital, Boston, Massachusetts.

*Cavitation caused by lung abscess or tuberculosis is excluded from this discussion. (These conditions are usually readily excluded by plain chest films and sputum examinations).

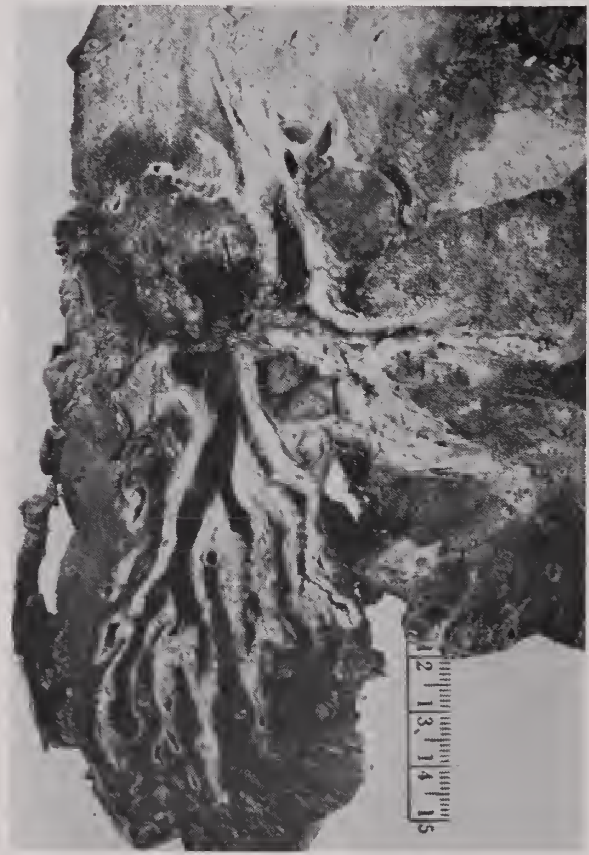

Figure 1. Photograph of surgically removed basal group of segments of left lower lobe. Note tubular and saccular dilatations of bronchi, marked thickening of their walls and crowding together of those showing the most extensive pathologic change.

(b) There may be a space outside the bronchial system in which secretions collect. They will overflow into it if there is a communication. Such conditions are, empyema, interlobar collections, chronic abscesses or cysts. When present, these lesions are usually associated with bronchiectasis of the contiguous segments. Investigations with contrast media and their management are similar.

Acute respiratory infections cause a bronchorrhea and the sputum may be thick. Then, there is excess mucus production plus the products of inflammation. This type of purulent sputum does not necessarily indicate the presence of spaces for collection and concentration. During acute episodes, studies of the bronchial pattern should not be done, for inflammatory thickening of the mucosa, spasm and secretions will interfere with proper flow of the contrast media. In chronic cases, however, it is well to remember the axiom that thick sputum must be concentrated somewhere and probably in a dilated bronchus.

2. Persistent, dry, hacking type of cough must have a cause.

In our experience, some explanation is usually forthcoming for patients who persist in being harassed by a dry, hacking cough. With negative x-rays and with tuberculosis and tumor ruled out, the most common organic cause is segmental or subsegmental bronchiectasis or atelectasis*. With little or

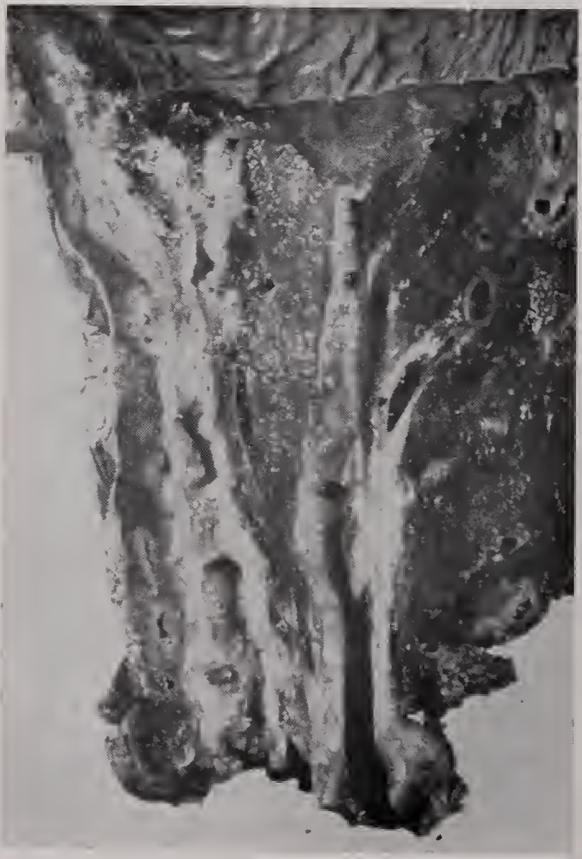

Figure 2. Photograph of surgically removed anterior and medial segments of right lower lobe. Note marked thickening of bronchial walls and peri bronchial fibrous tissue replacement. Microscopically there was evidence of chronic pneumonitis in the medial segment.

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*Often, suggestive evidence of segmental atelectasis can be seen without contrast media. Contiguous segments may show compensatory emphysems. Oblique or lateral films may show changes which are masked in the single P-A exposure.

no secretion raised, the bronchograms are apt to show crowding of segmental bronchi or a lack of filling. Either abnormality may indicate contraction of the segment and atelectasis.

Upon exploration, atelectatic segments are found to be solidified, contracted and often surrounded by adhesions. Pathologically, they show chronic pneumonitis, peribronchial fibrosis, and the bronchi are dilated and often filled with inspissated secretions. The mucosa will usually show the typical cross striations seen so commonly in bronchiectasis.

The most frequent segments to become involved in such a process are the two segments of the middle lobe. When only the middle lobe is involved, some authors have used the term middle-lobe syndrome. Patients with dry form of bronchiectasis or with atelectatic segments are more apt to have occasional attacks of hemoptysis than the productive forms. In fact, in our Clinic, pulmonary bleeding has been found to be more indicative of bronchiectasis than of tuberculosis or tumor.

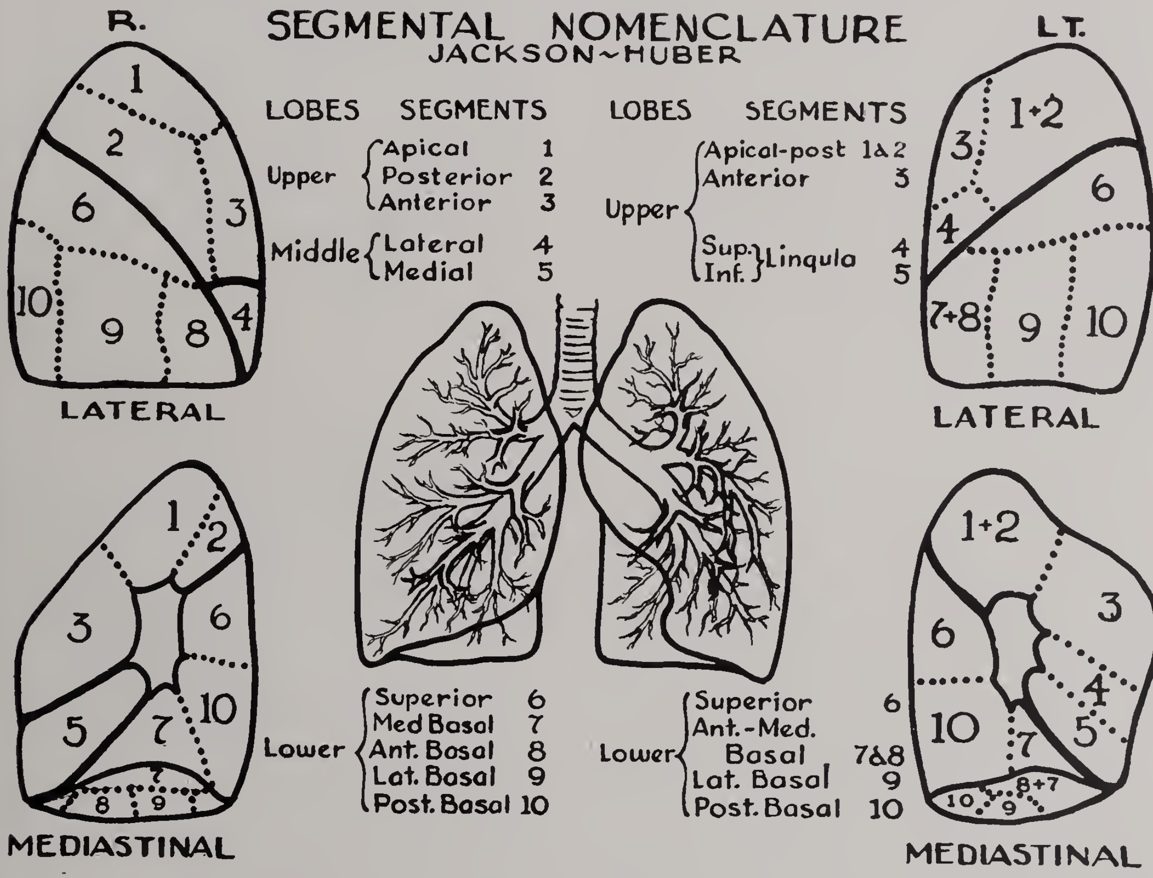

Figure 3. Lateral and medial surface projections of pulmonary segments with nomenclature.

3. All persistent coughers do not necessarily have bronchiectasis.

About one half the number of patients suspected of having bronchietasis yield negative bronchograms. With allergic and occupational inhalants ruled out, the great majority are found to he heavy smokers. In fact, we always propose that smokers who have a dry cough and negative films abstain for a trial period. If symptoms disappear, bronchography is not necessary.

4. All that wheezes is not asthma.

Segmental abnormality may act as a trigger mechanism to set off attacks of bronchospasm in other parts of the system. The point of irritation may be in the diseased segment or secretions which have stagnated in this segment may overflow into others, thus exciting spasm or closure of normal bronchi as a protection mechanism.

In our Clinic, structural abnormality was found in the bronchial system of 40 per cent of severe asthmatics studied with contrast media. The majority revealed localized bronchial dilatation. The others revealed pulmonary cysts or partial stenosis with air trapping.

When patients with asthma and associated bronchiectasis are explored, the involved segments are usually not contracted, but instead are distended by trapped air. It is common to observe little or no pigmentation in such abnormal segments. They fail to respond to variations in intrabronchial pressure as do normal segments. Usually, hilar lymph glands are enlarged and often are arranged to form a constricting ring around the bronchus.

5. Repeated attacks of pneumonia in the same lobe must have a cause.

When frequent colds occur, some of which "settle down" in the chest, selecting always the same side, or when patients have repeated attacks of pneumonia, investigation will almost always reveal some alteration in the bronchial pattern, usually bronchial dilation. In all such cases, it is extremely important to watch the contrast media as it flows toward each segment. Persistent nonfilling is just as indicative of pathology as filling with dilatation. There may be only pleuritic pain or vague soreness in the chest which hangs on after a cold The discomfort may persist while all signs of bronchial irritation have disappeared. In patients who suffer pain or chest discomfort, one finds at exploration almost invariably inflammatory adhesions between the lung and the chest wall. Abnormal stress is in that way placed on intercostal nerves.

6. Constitutional evidences of chronic sepsis may have a chest origin.

Intermittent periods of low-grade fever are not uncommon, the elevation being aggravated during periods of upper-respiratory infection. Chronic fatigue is almost as common a complaint in patients with bronchiectasis as a productive cough.

7. Clubbing of the fingers in the absence of heart disease requires an explanation.

Clubbing of the fingers is more frequently associated with bronchiectasis than with any other chronic disease of the lung. Why it occurs in some cases and not in others is unknown. The element of chronic infection or pneumonitis apparently has more to do with the development of clubbing than does the extent or character of the structural changes in the lung. Usually, dry types of bronchiectasis do not show clubbing. When the cough is productive of purulent sputum or when there is other evidence of chronic infection, some degree of clubbing is common. There does not seem to be a definite relationship between the severity of the clubbing or its duration and the extent or duration of the structural change in the bronchial system.

When clubbing does exist in the presence of known bronchiectasis, one can predict with certainty that areas of induration or solidification of subsegments or complete segments will be found. On section, these areas show extensive peribronchial infiltration, pneumonitis or multiple abscesses.

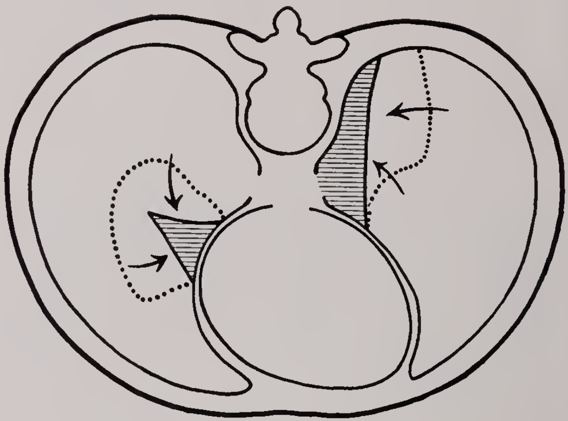

Figure 4. Cross section of chest in case of bilateral bronchiectasis in which right medial basal and left posterior basal segments were involved. Dotted line shows normal volume of those segments at level of cross section. Shaded area represents diminishd volume after contraction of diseased segments.

8. Stiffness or painful joints, as with clubbing, may be a manifestation of bronchiectatis.

Arthritis is a common complaint in middle-aged or older patients with bronchiectasis. In a few patients, the presenting symptom was arthritis. A careful search for possible foci of infection led to chest x-rays and bronchograms which demonstrated abnormal patterns. The contrast media may reveal, not dilated bronchi, but marked crowding of the bronchi of a segment or lack of filling. Either is evidence of pathology and usually one finds the typical airless and solidified segment which results from a long-standing inflammatory process. Although the exact mechanism of the joint changes associated with bronchiectasis is unknown, when the two conditions co-exist, one can promise that following excisional therapy of all the diseased pulmonary segments, the accompanying pulmonary osteo-arthropathy will greatly improve or disappear altogether. In several instances, patients with severe, even crippling arthritis, have noted within twenty-four hours of operation a disappearance of joint pains and improved function. Clubbing has been seen to fade away during the two weeks of post-operative hospital stay.

9. Bronchiectasis can masquerade as heart disease.

Not infrequently, patients with bronchiectasis will have substernal pain, anginal-like attacks, or suffer cardiac irregularities and be treated for heart disease. The usual cause for this association of symptoms is a bronchiectatic lingula or middle lobe, or both, sometimes containing small, multiple, cortical abscesses, densely bound to the pericardium by inflammatory adhesions.

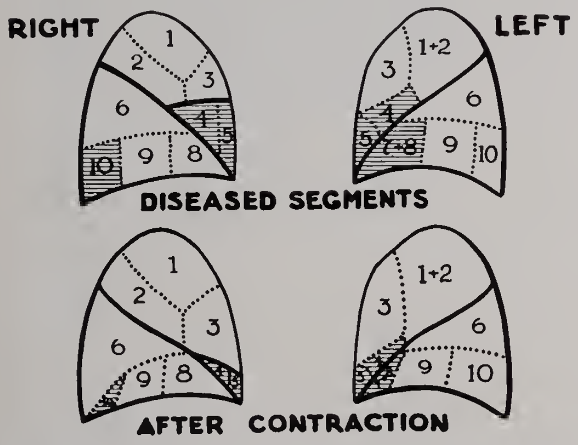

Figure 5. Diagram of lateral surface projection of pulmonary segments in case of bilateral bronchiectasis in which the middle lobe and posterior basal segment on right and lingula and antero medial basal segments on left were involved. Note marked shift in position of diseased segments after they became airless and contracted. The uninvolved segments in young individuals undergo true hypertrophy whereas in older patients the compensatory increase in volume results in emphysema which may be of a pathologic type.

10. Positive stethoscopic signs are variable or they may be absent in bronchiectasis.

The diseased segment or subsegment usually contracts to a small fraction of its original volume, thus greatly decreasing the costal surface area. Adjoining segments hypertrophy or distend and thereby assume a large porportion of the surface area of the lung. For example, when all basal segments are involved, the superior segment may have enlarged to such an extent that its size comes to equal the volume of the normal lower lobe. The lower border of the superior segment usually extends almost to the diaphragm in the costophrenic sinus, thus completely enveloping the contracted basal group. One may, therefore, hear normal breath sounds posteriorly when basal bronchi are involved. Since the medial basal segment does not have a costal surface, abnormal sounds originating from disease limited to this branch will be completely blanketed by the overlying normal segments.

11. Acquired bronchiectasis is essentially a segmental or subsegmental disease (85 per cent or higher).

Unless bronchiectasis is associated with congenital cystic disease or has developed as a sequela to an abscess, it is rare to find all segments of either lower lobe involved. Most frequently, the four basal groups on the right or the three basal groups on the left are involved. However, it is rather common to find the disease limited to just one or two of the basal segments, especially if there is bilateral disease. The most common segments to be involved are, (a) any one or combinations of the basal segments (Seg. R or L 7, 8, 9, 10); (b) inferior segment of the lingula (Seg. L 5); and (c) medial segment of the right middle (Seg. R 5). Next in frequency come, (d) superior segment of the lingula (Seg. L 4); (e) medial segment of the right middle (Seg. R 4); and (f) anterior segment of either upper lobe (Seg. R or L 3). (See Fig. 1.) On rare occasions, the superior segment of the lower and the posterior and apical of the upper are found to be involved. It is quite obvious that bronchiectasis is a disease of stasis. Those dependent segments where secretions stagnate are the ones which undergo permanent alteration in the caliber of their bronchi and irreversible changes in the parenchyma. Since humans are erect animals, those segments found to be by far the most commonly affected do occupy the most dependent position within their respective lobes. All have a diaphragmatic surface. It is interesting to point out that in pulmonary tuberculosis an exactly contrary distribution of the frequency of the diseases occurs; that is, first the posterior segments of the upper lobes (R 2 and L 2), then apical segments (R 1 and L 1), then superior segments (R 6 and L 6), the anterior (R 3 and L 3) and finally, and very rarely, the basal segments which have a diaphragmatic surface.

12. Bronchiectasis is bilateral in distribution in more than a third of the cases.

Rarely are the two sides involved to equal extent. It is possible from a clinical appraisal, functional tests and adequate bronchograms to determine which side is the principal offender. The more affected side should be treated first, for a unilateral operation may be sufficient to establish control of symptoms and to eliminate the general ill effects of the disease. With the major spaces for stagnation removed, the segments showing less severe bronchial dilation or pneumonitis may overcome the element of infection and be converted to a dry type of bronchiectasis, and this may permit an indefinite postponement of the contralateral surgery. In our Clinic, 126 cases of bilateral bronchiectasis have been treated surgically, yet it was necessary to carry out bilateral surgery in only 51 (40 per cent). Results of surgery in bronchiestasis closely parallel the surgeon's ability to eradicate the disease completely. It is extremely important, therefore, to be absolutely certain of the pattern of the disease before embarking upon a program of excisional therapy. In the event of subtotal disease on one side, it is essential to remove all the bronchiectasis on that side. If this is not done, sooner or later symptoms will recur and post-operative bronchograms will probably reveal residual disease which necessitates re-operation.

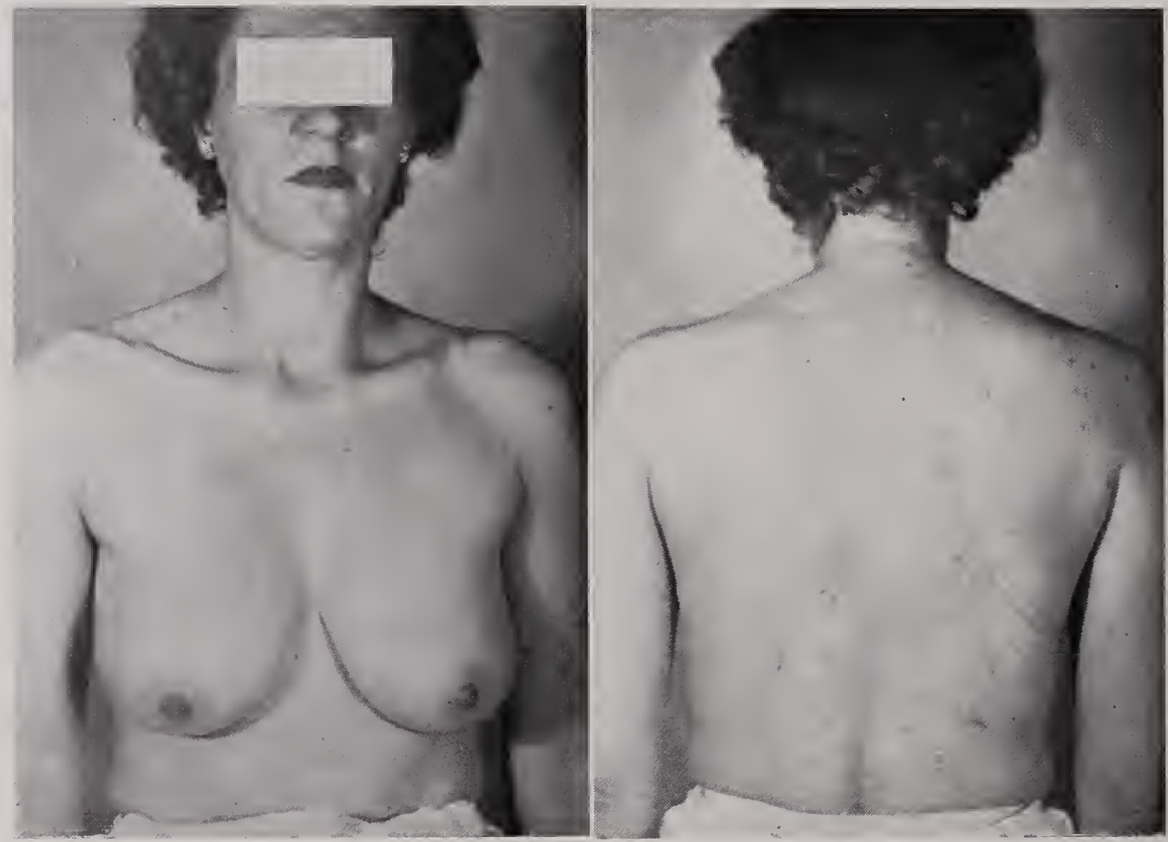

Figure 6. Miss E.K. (7709), age 32—after right multiple segmented resection for bronchiectasis. She had suffered from "bronchial" asthma for 6 years. The attacks became progressively worse so that during the last six months she was forced to sleep in a chair during most nights. Repeated allergic studies were fruitless. Anti spasmodic drugs became increasingly less effective. Contrast media revealed non-filling of the middle lobe segments. They acted as trigger points which excited attacks of generalized bronchospasm. After definitive excisional therapy these attacks disappeared. The patient is now well and is off all drugs.

13. Direct inspection of the lung yields much information.

To visualize, palpate and watch segments of lung respond to inflation and deflation provides an accurate method of determining the presence of and the extent of bronchiectasis. In our Clinic, 450 chests are explored each year for the purpose of carrying out some type of excisional therapy. Usually, the difference between healthy and diseased segments is clearly obvious. Healthy segments inflate and deflate easily and uniformly. Involved segments with associated pneumonitis are airless, indurated and "porky." They remain of constant volume during inflation tests and are much smaller than the air-containing normal segments, yet larger than the deflated normal segments. In types of bronchiectasis where the element of infection is not prominent, the abnormal segments frequently trap air, causing them to remain "ballooned out" during deflation, and they are fluffy to palpation. Pigmentation of such segments is usually scanty or absent so that from the appearance alone it is possible to delineate the functioning from the non-functioning parts. Almost invariably, lymph glands that drain the abnormal segment will be found to be enlarged whereas the glands of normal segments are usually of normal size and consistency. Surface adhesions are tell-tale signs of previous pleural irritation. When the underlying lung has been responsible, the adhesions are dense and vascular, whereas adhesions over normally-functioning and moving parts are filmy and avascular.

14. The segment as a unit of excision.

Fortunately, any one of the 18 individual segments or, in certain instances, subsegments may be enucleated without disturbing healthy ones within the same lobe. Churchill and Belsey(1), Nelson(2), and others have called attention to the segmental nature of bronchiectasis and to the necessity of removing the lingula of the left upper lobe when it was concomitantly diseased with the left lower. Overholt and Langer(3, 4) developed a new technique which permitted the encleation of any one of the individual segments by an anatomical dissection of the intersegmental plane. This obviated the necessity of lung clamps and sutures which damaged and deformed remaining segments and did not always permit the precise enucleation of all of the diseased segments. The pulmonary lobes are divided into compartments that are as distinct as the sections of a cauliflower. The segmental bronchus, artery and central vein are centrally placed within the segment. They can be divided in the beginning. Then, after inflation of adjoining segments, the diseased one is peeled out, very much as one removes the gall-bladder after the cystic duct and artery have been divided. Intersegmental veins traverse the plane between segments and a few fine ligatures are needed for them. Otherwise, the segments can be removed cleanly, without blood loss or air leak. The lower volume of the remaining lung is more capable of filling the hemithoracic space than after lobectomy. Re-expansion of the lung is readily accomplished. For segmental resection, there is no occasion to remove any ribs so that the thoracic wall is normally restored. Most patients elect to leave their beds on the third or fourth postoperative day and are given permission to leave the hospital within two weeks of their entrance. The great advantage of segmental excision in bronchietasis is obvious from what has been said before. In the first place, no functionable lung tissue need be sacrificed in any case. Secondly, excisional therapy is applicable in cases of bilateral disease without fear of reducing pulmonary function.

15. Not every case should or can be treated surgically.

There are three categories of patients with bronchiectasis for which surgery is not indicated:

(a) Dry types with minimal symptoms.

There are dry types of the disease where evidence of chronic infection is lacking and symptoms are absent or minimal. Structural changes may exist in the bronchial pattern and the health of the individual not be seriously impaired. Usually, the condition is discovered in patients who have raised on one or two occasions blood-tinged sputum. If there is not a troublesome cough nor evidence of constitutional ill effects or bleeding of consequence, further observation is advised.

(b) Cases with universal or widely-disseminated disease.

If bronchograms reveal changes in every bronchopulmonary segment so that it would be impossible to eradicate most of the disease, excision of any group of segments may not materially improve the situation. Surgical treatment may then be contra-indicated. On rare occasions, however, one will find extensive saccular dilatations in one lobe and only tubular changes throughout the remaining part of the bronchial system. The principal reservoir in which secretions stagnate may then be removed with benefit.

(c) Cases with less than total bronchiectasis, but with extensive emphysema in all other segments.

Older patients with long-standing bilateral basal bronchiectasis may have their pulmonary reserve severely crippled by secondary changes in the over-distended segments of the upper lobes. If patients are on the verge of pulmonary decompensation, they are beyond the reach of surgical benefits.

Most patients who are rejected for excisional therapy represent long-standing and neglected cases in the older age groups. If the benefits of surgery had been available to them when the disease was more localized, they would have escaped many years of poor health and their lives would have been prolonged.

SUMMARY

1. Many patients who have a chronic, productive cough do so because there are abnormal spaces in the bronchial system which serve as reservoirs which concentrate secretions.

2. Recurrent chest colds, pneumonia, chest pain, low-grade fever or even asthma may result from structural changes in the bronchial system.

3. The value of the correlation of clinical and exploratory findings in bronchiectasis has been discussed.

4. Bronchiectasis is a segmental disease, and it is often bilateral in its distribution.

5. Pulmonary segments may be utilized as units for excision in both unilateral and bilateral cases of bronchiectasis.

6. No surgical endeavor has been rewarded by a more grateful group of patients than those treated for bronchiectasis.

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President, Nebraska State Dental Association
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Mr. President, Distinguished Guests and Members of the Nebraska State Medical Association: I am pleased to bring to you the greetings and best wishes of the 900 members of the Nebraska State Dental Association.

I want to pay tribute to the advancement made by your profession. This has been brought about by higher education, research, better reporting of clinical findings and research in chemistry with the discovery of the sulpha drugs, penicillin, terramycin, aureomycin, etc. These discoveries and their administration to your patients have been a great factor in reducing the number of days of illness and make it possible for the patients to return to normal activity in the shortest possible time. In addition to this, countless lives have been saved.

Dentistry, too, has come a long way in the last quarter of a century. With two years of predental work required and four years of dentistry, the student is now better educated and trained to render a better service to his patients. Each year more hospitals are offering internships for dentists. This will bring about a better relationship between the two professions and give the dentists a better understanding of hospital methods and the problems of General Medicine.

In recent years a great deal of investigation has been made to determine the value of the addition of fluorine to the municipal water supply systems to reduce the incidence of dental decay. Claims are made by the U.S. Public Health Service that dental caries can be reduced about 40% by this process. The Omaha District Dental Society, Omaha Douglas County Medical Society, Omaha Douglas County Board of Health and the Omaha Chamber of Commerce, the American Dental Association and the Nebraska State Dental Association have endorsed this princple of fluoridation of the municipal water supply.

Many cities over the country have already installed equipment to add fluorine to to the water supply. The cost is about 10 cents per person per year. I would recommend that each of you investigate and support the fluoridation of the water supply in your community.

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*Address delivered at the Annual Convention of the Nebraska State Medical Association, in Lincoln, May 2, 1951.

I would like to mention that in Omaha for the past several weeks there has been a trailer, with an x-ray machine installed and three dental chairs, which has been making the rounds of several schools of the city, taking bite-wing x-rays and regular dental x-rays, so that we may know what the status is so far as the children's teeth are concerned. With the assistance of the Health Department under Dr. Edwin Lyman, the Board of Education and the Dental Society, these groups have been working together to make this survey, and from these findings we will have some idea as to the prevalence of dental caries in this community.

After the National Cancer Institute initiated in 1946 its program for improved cancer teaching in the medical schools, a similar system of teaching grants was extended to dental schools. This program started at the end of 1947 with the approval of the National Advisory Cancer Council and has met with enthusiastic response among members of the dental profession. Thirty-six of the nation's 40 dental schools have taken advantage of the dental teaching grants, to give their students a better grounding in cancer pathology, recognition of early lesions and principles of cancer diagnosis and treatment. Most of the grants have been for the maximum amount allowable, $5,000.

Twelve per cent of all cancers arise in the oral cavity or on the skin of the head and neck. The dentist, whose patients come for examination and treatment at regular intervals, has an excellent opportunity to observe such lesions in their early stages and make certain that the patient obtains prompt diagnosis and treatment. The dentist's ability as a case finder, however, will depend on whether he is constantly on the watch for signs of malignancy and whether he has been trained to recognize possible cancerous lesions.

Good oral hygiene is considered an important factor in the prevention of oral cancer. Irritation by malformed or broken teeth, chronic ulceration or infection, leukoplakia and other unhealthy conditions may predispose the mouth tissues toward malignancy. Correction of such conditions is an important service that the dentist can give his patient.

It seems to me that the greatest challenge to medicine is to reduce the disabilities and deaths resulting from the ever increasing number of heart and cancer cases. Great progress has been made in the field of preventive medicine and the refinements in surgery and other branches of medicine that I am sure we can all look forward to the solution of, or at least the reduction in, the number of heart and cancer cases.

I want to thank you for the privilege of appearing on your program today and would like to have you know that the Nebraska State Dental Association is willing and anxious to cooperate with medicine, as evidenced by the campaign of last fall which was not only local but nationwide in scope. The dentists in the American Dental Association did a good job, I think, to help in the campaign which we think, and you know, of course, was successfully completed for the good of the United States.

The High Cost of Drugs for Recipients of Old Age Assistance*

Report of Maternal and Child Health Committee

R. E. GARLINGHOUSE, M.D.
Lincoln, Nebr.

One of the duties of the Maternal and Child Health Committee of the Nebraska State Medical Association is to act in an advisory capacity to the state Department of Old Age Assistance and the state Board of Control. These latter two bodies have been most cooperative and have adopted many of the suggestions of the M.C.H. Committee. However, in the past few months there has been a rather marked increase in the cost of drugs to old age recipients and because of this, the Program Committee has assigned this time to the M.C.H. Committee in order that this problem may be represented to the members of the Nebraska State Medical Association.

The state Department of Old Age Assistance and the Board of Control are well satisfied with fees paid to the physicians for old age recipients. We believe this may be attributed to the adoption of the fee schedule of the Nebraska State Medical Association, with which you are all familiar. There are, on the other hand, no restrictions on the amount or kind of drugs paid for by the Department of Assistance. (There are a few exceptions to this, as the M.C.H. Committee has recommended that the Department of Assistance not pay for some drugs considered to be in an experimental stage). This lack of restriction on drugs which may be prescribed or dispensed is, in all probability, the greatest factor in the increasing cost of drugs to old age recipients.

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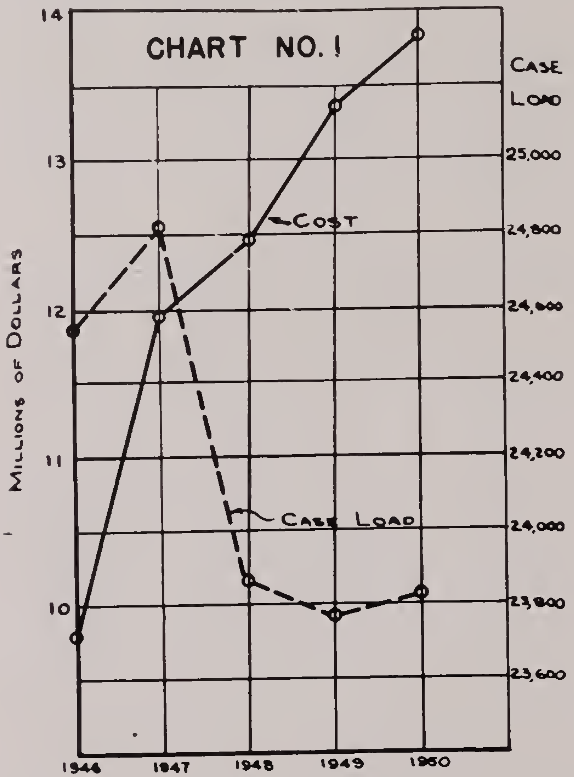
*Read before Annual Convention Nebraska State Medical Association, May, 1951.

A review of the medical care program of old age recipients in various states reveals a wide variation in the drugs allowed, ranging from no restrictions as we have in Nebraska to the State of South Dakota which pays for only 3 drugs; namely, insulin, liver extract, and digitalis. The M.C.H. Committee certainly can not suggest that such a drastic program as that of South Dakota be adopted, nor does the Department of Assistance favor such a program. However, it would appear that some control should be adopted.



One year ago the House of Delegates of the Nebraska State Medical Association instructed the M.C.H. Committee to conduct an educational program with the hope of reducing the drug costs. Such a program has been conducted with some measure of success, but not with the success that was anticipated.

In reviewing the cost of drugs in the old age assistance program, we shall present facts concerning the entire program. These figures will be taken back only to 1946—which is the first year for which adequate figures on the breakdown of medical costs are available. First, it must be stated that the old age assistance program is a tremendous one. At present it costs nearly $14,000,000 per year. Approximately 23% of the state tax money goes to 2½% of the population.

TABLE I—YEARLY COST SINCE 1946

1946	$ 9,778,316.00
1947	11,919,387.00
1948	12,487,650.00
1949	13,358,598.00
1950	13,805,748.00

During this same period the case load was as follows:

TABLE II—YEARLY CASE LOAD SINCE 1946

1946	25,556 cases
1947	24,814 cases
1948	23,897 cases
1949	23,767 cases
1950	23,843 cases

Chart I gives the yearly cost of the program as contrasted to the average yearly case load.

The case load variation has been very slight, with only 1,047 difference in the highest and lowest number on the old age rolls. During the past three years the case load has been practically stationary.

The yearly cost has steadily increased. The marked increase between 1946 and 1947 was, in most part, due to an increase in the ceiling from $40.00 to $50.00 per month for old age assistance recipients. Also, at the special session of the legislature in which this increase in the ceiling was made, complete medical care was provided. Again in 1949 the legislature increased the ceiling of the grant to old age recipients from $50.00 to $55.00 at which figure it now stands. Approximately half of the cost of this program is provided for by federal matching funds.

Drug Costs. In analyzing the increasing cost of drugs, we shall contrast the drug cost with medical fees (which includes general medical fees and surgical fees).

The cost of drugs and medical fees by quarters is as follows:

TABLE III

Fiscal Year, 1946-1947—	Drugs	Medical Fees
1st	$37,022.00	$43,955.00
2nd	39,938.00	47,997.00
3rd	50,724.00	65,684.00
4th	63,848.00	85,989.00

Fiscal Year, 1947-1948—		
1st	60,708.00	83,834.00
2nd	47,776.00	53,235.00
3rd	54,622.00	61,588.00
4th	61,004.00	69,457.00
Fiscal Year, 1948-1949—		
1st	60,438.00	68,069.00
2nd	64,815.00	68,828.00
3rd	66,952.00	75,201.00
4th	74,308.00	75,214.00
Fiscal Year, 1949-1950—		
1st	75,830.00	85,479.00
2nd	78,677.00	84,473.00
3rd	81,265.00	84,569.00
4th	82,753.00	83,717.00
Fiscal Year, 1950-1951— (First Two Quarters)		
1st	86,284.00	82,764.00
2nd	83,034.00	79,309.00

Chart II represents the cost of drugs contrasted with medical fees.

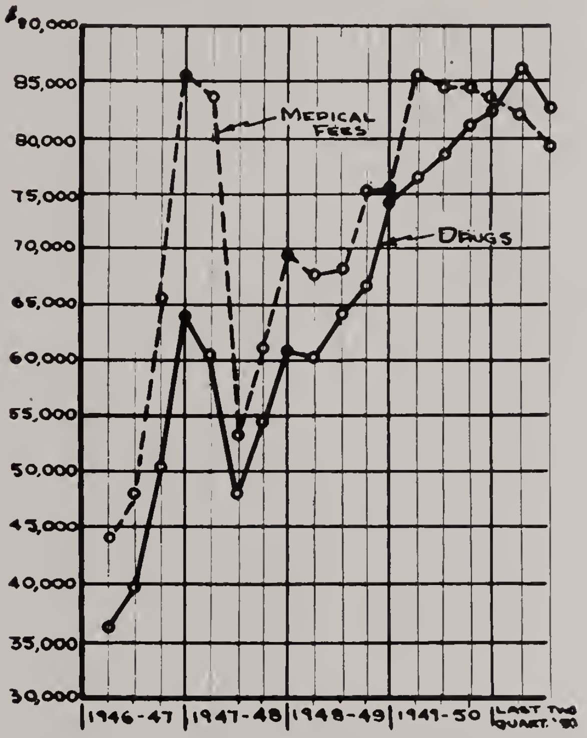
Several points in this chart require an explanation. As has been stated, the special session of the legislature in 1946 passed a bill authorizing complete medical care. This is represented by the rather rapid rise in medical costs the last two quarters in 1946 and the first quarter in 1947. Then the 1947 regular session of the legislature passed the regulation that the state would pay 75% and the county 25% of medical costs. Prior to this the state had paid the entire medical costs. The counties, therefore, obtained all medical care possible prior to this bill going into effect—which represents the very high peak in the last quarter of the fiscal year 1946-1947 and the first quarter of the fiscal year 1947-48.

In the second quarter of the fiscal year there was a decided drop in medical costs. This represents the first quarter in which there was both state and county participation in the cost of medical care.

It was then anticipated that there would be a steady rise in the medical costs for some time as more old age recipients became aware of the availability of medical care. It was also anticipated that eventually this rise would level off and then fluctuate with case load only. It has been shown that the case load has remained fairly constant. The cost of medical fees has definitely followed this anticipated trend, the peak being reached in the first quarter of the 1949-50 fiscal year. Medical fees since that time have even shown a slight decrease. On the other hand, the costs of drugs has not leveled off but has steadily gone up and in September of 1950 the drug cost increased to the point that for the first time drug costs to old age recipients was greater than medical fees. During the last quarter of 1950 drug costs did decrease slightly—which we attribute, in part at least, to the educational program. However, this decrease was small and drug costs still exceed medical fees.

There are several obvious reasons for this increasing drug cost. There is no question that in many instances costly drugs are used when less expensive drugs would be equally efficacious. There are also abuses both by old age recipients and by doctors. It is known that there are instances in which a recipient would obtain a prescription adequate to last a month or more and two or three days later have the same prescription refilled. This has been especially true of vitamin prescriptions. It is not difficult to guess that the second prescription ended up in the hands of some neighbor not on assistance.

CHART NO. 2



Only a small percentage of the doctors in the state are guilty of unnecessarily running up high drug bills. However, this small percentage does make a very appreciable increase in drug costs. It has been the duty of the M.C.H. Committee to review many of these excessive bills. Time does not permit a full review of excessive drug bills but one case will be given as an example. We assure you that there are many others equally as high.

An 89-year-old woman, hospitalized for "gall stone attack" on December 7, 1950, died January 13, 1951, approximately 5 weeks after being admitted to the hospital.

TABLE IV

Hospitalization	$222.00
Laboratory	17.00
E.K.G.	10.00
Transfusion	40.50
Drugs	505.80
Physician Fee	101.00
TOTAL	$896.30

Following is the itemized drug bill:

TABLE V

Depropanex	$ 23.10
Parbexin	20.30
Vitamin B6	44.00
Penicillin	33.00
Lipo Adrenal	150.00
Streptomycin and Penicillin	18.00
Chloromycetin	83.20
Mercuhydrin	14.16
Aminophylin	1.04
Digifortis	1.35
Glucose 5% with B6	2.90
Glucose 5% with Flobeysin-Parbexin	3.50
Glucose 5% in H2O	24.30
Elix. Donnatal	.60
Hydase	10.50
2½ Glucose in Saline	8.80
Flobeysin	27.00
Alsical Tablets	1.56
Banthine Tablets	17.02
A.M.T.	5.25
Parbexin	.80
Vitamin B12	1.50
Amphojel	2.70
Coramine	.50
Oxygen (2 hours)	2.00
Milk of Magnesia	2.60
Bilron	1.92
Tras. and PB	.90
Castor Oil	.50
Paragoric—Bismuth	.70
ASA—Nembutol	.40
Geriplex Tablets	1.20
Salygan Theophyllin	.50
	$505.80

It is not within the scope of the M.C.H. Committee, nor do we have the authority, to review the clinical side of these cases of high drug bills for old age recipients. No doubt some cases in which a very high drug bill is submitted are justified, but this committee feels that most have no justification. The preceding case we shall leave to the judgment of the reader.

Much time has been spent in discussion of this rising cost of drugs by the M.C.H. Committee, the state Department of Assistance and the Board of Control. There are several possible solutions to this problem. One of these, an educational program, has been attempted through bulletins, publications in the state medical journal, and reports to the Councilors and House of Delegates. Success of this effort has not been gratifying.

It has been suggested that the more obvious cases of abuse be submitted to the state medical committee on ethical practice for thorough investigation and disposition. The state Department of Assistance and the Board of Control have been reluctant to do this up to the present.

The M.C.H. Committee, after careful consideration, feels that the best solution would be the use of a formulary which would be the product of the Nebraska State Medical Association. We feel that such a formulary would be welcomed by the state Department of Assistance and Board of Control, and that these two bodies would adopt it without delay. The Nebraska State Medical Association fee schedule has worked exceedingly well and it is reasonable to believe that a formulary would be equally as effective. A formulary to be established must be authorized by the House of Delegates and backed by the members of the state association. It should be carefully drawn up by competent authorities in pharmacology and therapeutics. It has been suggested that the state pharmaceutical association might not favor a formulary. During the past year the M.C.H. Committee met with the Board of Directors of the Nebraska Pharmaceutical Association and at this meeting the opinion was expressed that a formularly would be favored by the pharmaceutical association. It would seem wise to include a pharmacist on any committee which might be formed to draw up a formulary.

It is the opinion of the M.C.H. Committee that the quality of medical care to old age recipients would not be lowered by the use of a formulary, nor would there be any appreciable restraint of the doctor's choice of treatment. It is the purpose of the M.C.H. Committee to keep the care of old age recipients at its present high level, but compatible with sound economy.

SUMMARY

1. The case load of old age recipients has remained fairly constant in the past 5 years but the total cost has steadily increased. This latter increase can be accounted for by 2 increases in the ceiling and the addition of complete medical care.

2. Medical fees have now reached a fairly constant plateau, as was anticipated, due in most part to a very effective and fair fee schedule. On the other hand, drug costs, on which there are no controls, have steadily increased and now exceed medical fees.

3. An educational program has been conducted in the hopes that drug costs might be reduced, but without any great degree of success.

4. Some form of control of drug costs would seem in order and it is the opinion of the M.C.H. Committee that a formulary—established by the Nebraska State Medical Association — would be the most effective control.

The Orthopaedic Care of Compound Fractures*

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In order that we may discuss the local treatment of compound fractures as well as show you some representive problems in detail in the time alloted, little attention will be paid to the concomitant general symptoms associated with causitive trauma or the treatment of late complications.

The aim in the treatment of compound fractures is to convert a contaminated wound into a clean one. Proper emergency care is of prime importance. It is agreed by everyone that a compound wound should be protected from additional contamination with a sterile dressing and the fracture should be immobilized when the patient is transported from the scene of the accident to the hospital. Too often, this simple measure is not carried out. Non-professional rescue squads have two schools of thought as to the proper handling of these compound fractures. Some immobilize the extremity with traction; thus, when the patient reaches the hospital the contaminated bone ends have been replaced within the wound. Another method uses the wire mesh splint which supplies external support without replacing the potentially infected fragments. Obviously, the latter method is the one of choice, especially if the wound is protected with sterile dressings which are part of the equipment of the emergency ambulances.

The opportunity for careful examination presents itself as the patient reaches the hospital. If there has been no head injury so that the patient is responsive, evidence of motor and sensory loss to the extremity may be determined, while inspection of the terminal circulation will determine the integrity of the major vessels. This information must necessarily be acquired before rather than after definitive surgery has been done. If circulation is grossly embarrassed, a surgical exploration will usually reveal a lacerated vessel of considerable size or an interruption of the main trunk to the limb.

X-ray examination of all suspected sites of fracture and dislocation is essential not only to establish the diagnosis but to determine the treatment to be employed. However, in profound shock, this added diagnostic measure is better postponed unless it can easily be done with a portable apparatus during the time the patient is receiving treatment for shock. Extremity x-rays are not difficult to obtain without disturbing the patient and are of great value in determining the type of fracture, the amount of comminution and the displacement.

Compound fractures are surgical emergencies; it is generally recognized that 12 hours is the limit between the contaminated wound and one that is infected. It is during this period that good definitive treatment should be instituted. The methods of treatment carried out may roughly be divided into three types and this is determined by the amount of soft tissue injury as well as by the type of fracture.

Type I consists of a small penetrating wound with very little necrotic tissue. This is commonly seen in the compound fracture where a spicule of bone has protruded outward from within or in cases of penetrating wounds from gunshot or some sharp object. Type II are the more extensive wounds with moderate amount of devitalized tissue but with little or no foreign material. Type III are those with extensive soft tissue laceration, contamination with foreign material, such as dirt from the street or road, and in cases of shotgun wounds there is often a great amount of foreign material forced into the wound by the shell. This third type is the one with which we are primarily concerned.

The surgical treatment of the soft tissue is preceded by local cleansing of the skin with Dial soap, one of the surgical soaps with G-11 or hexachlorophene as a germicidal agent. This skin preparation has proven to be much more efficient than that done with the routine surgical antiseptic. It is essential that the hair be shaved from the area surrounding the wound for a distance of several inches. The wound then should be copiously irrigated with sterile warm saline solution using a gravity apparatus. No chemical antiseptics are used in or about the wound.

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*Presented at the Annual Sessions of the Omaha Mid-West Clinical Society, October 25th, 1950.

Specifically, treatment of type I consists of cleaning the protruding spicule of bone with ether and alcohol and then careful reduction of the fracture by traction and manipulation. The tract is then excised and closed loosely with interrupted non-absorbable suture. In type II and III, systematic thorough debridment is required excising all tags of tissue which may become devitalized. The margins of the ragged compound wound should be trimmed smoothly. If this procedure is done under a tourniquet, which is safe for a short period, lacerated tendons and nerves can be more easily identified and repaired. When this is not advisable due to condition of the patient or defect in tissue, important structures should be identified by the use of fine black silk through their ends.

The handling of the bone fragments themselves is dependent upon the amount of comminution and displacement. Fragments with uninterrupted blood supply and those which are not too grossly contaminated are replaced and fixed preferably with some absorbable material. However, the vitallium screw affords the ideal fixation. The small ones with loss of blood supply and larger ones grossly contaminated and free are better removed.

The use of internal fixation is by no means routine but with the antibiotics now employed in compound fractures, the simple internal fixation screws and pins may be safely used although with the possibility in mind that a chronic osteomyelitis may ultimately occur. An open reduction done with visualization and maintained by one or several vitallium screws, shortens greatly the period of convalescence and many of these fractures unite at the usual rate. However, delayed union or non-union are frequently encountered. The recognized disadvantages of internal fixation in compound fractures are the additional operative trauma, and the introduction of foreign material. If infection develops and becomes chronic, drainage usually continues until the metal is removed. However, its removal is better postponed until there is some evidence of union.

The closure of the wound is dependent upon the type and the degree of contamination. Often, especially in the lower leg, with some loss of soft tissue, complete closure is impossible. A minimal amount of suture should be used in the deeper tissues and preferrably silk for the skin. In types II and III, especially, when several hours have passed, a rubber drain is placed into the dependent parts or through an independent stab wound so that dependent drainage may take place. Where there is extensive devitalization of tissue and the period between the trauma and surgery is greater than 12 hours, the wound should be left wide open and packed loosely with petrolatum. Secondary closure may be done after 10 to 12 days of adequate antibiotic therapy. Experiences during World War II revealed that 80 per cent of such procedures were successful.

Immobilization in plaster molded splints with skeletal traction by the use of a Kirschner wire is favored especially when the internal fixation in the lower extremity is not very firm. The limb should be suspended at least at a 30 degree angle, in the case of the lower extremity; and in the upper extremity the elbow, when possible, should be at right angles, with the forearm in the vertical position and suspended to an over-head apparatus.

Where circulatory embarrassment exists as a result of major vessel injury, etamon chloride R* is of definite value in the establishment of collateral circulation. This is preparation of tetraethyl amonium chloride and is now obtainable in the drug room.

As to the use of antibiotics, so much has been written and said about them that little need be added here. Suffice it to say, the dosage should be adequate.

The convalescent care of compound fractures resolves itself into prolonged periods of good plaster fixation immobilizing the joint above and below the fracture. In the lower extremity, weight bearing through the use of a walking iron and a rubber heel should not be considered until there is x-ray and clinical evidence of beginning union. The stimulus of weight bearing aids materially in consolidating the fracture. Usually, in the severe compound fractures, the period of immobilization and disability is in terms of months and sometimes years.

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*Park Davis & Co.

Following a period of plaster fixation and when union is firm but complete consolidation not yet present, the use of removable splints preferably of the leather covered aluminum type held in place with leather straps, may be necessary for a considerable period. These splints may be removed during resting periods.

In situations where non-union occurs, bone graft procedures using iliac grafts can be instituted at a much earlier period than before the advent of the antibiotics. In some instances, bone grafting has been done with success as early as two months following closure of draining sinuses.

The Physician's Opportunities and Responsibilities in a School Health Service*

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As the title indicates it is the aim of this paper to call the attention of the Medical profession to the opportunities of creating and maintaining a good school health service in their respective communities. That the exercise of these opportunities constitute professional responsibility is recognized by every physician who appreciates wholesome public relations through unselfish devotion toward a cause potentially beneficial to those who receive and those who supply the services which enter into it. And what is more important to any modern community than the health of the children who live in it? In the average American family no phase of living takes priority over the welfare of the child.

There is ample reason to stress the importance of a good health service in our school system when one appreciates the fact that the child of school age spends from 50% to 60% of his active hours in the class room or on the school ground. Indeed with the majority of this age group intellectual, social and emotional life directly or indirectly revolves around the school. Barring the administrative and teaching personnel no other group than the physicians have a greater privilege to exert their influence on the young members of this generation. The belief still held by some few medical practioners that a good school health service interferes with the family-physician relationship is justified only in communities with a poorly organized school health service and/or where there is a mutual lack of understanding between the school administration and the local medical personnel.

That there is ample room for misunderstanding in this sphere is readily admitted by any one who stops to consider the many and varied factors and interests which enter into a properly functioning school health service. However, the educators and physicians with their common objective to protect the health of the school child can I am sure, find a common meeting ground in their approach. Their interests being mutual, principles and procedures adaptable to the individual community may be worked out without difficulty. Far from constituting socialized medicine a good school health service administered under cooperative guidance of the local medical profession promotes the best of personal relationships between the physician and the families under his care.

FUNCTIONS OF THE SCHOOL HEALTH SERVICE

Regardless of the size or the per-capita wealth of the school district, the pupils are entitled to the protection from hazards of attending school. A well administered school health service has for its functions:

1. The control of communicable disease.
2. The establishment and maintenance of proper classroom facilities.
    - (a) Comfortable seating
    - (b) Good lighting
    - (c) Adequate ventilation
3. The promotion of sound health through periodic examinations by the family physician and encouragement in good habits of safety and hygenic living.
4. The establishment of rules and regulations pertaining to recreation and athletics.
5. The education in the principles of health in all areas consistent with

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*Read before Omaha Mid-West Clinical Society, October, 1950.

sound knowledge of biology and the training of personel expected to furnish instruction.

This is merely a skeletal outline of minimum objectives of a functioning school health service worthy of the name. Contrary to popular impression the extent to which this basic program can be applied depends less on the financial status of the district than upon the convictions on the part of the local medical profession that the service is an essential part of the school system. Educators realize and the public in general must be made to appreciate that knowledge without health is of little value and that both can be improved and safeguarded through better community effort. Among the greatest contributions the physicians can render to their respective communities individually and collectively is through their own enthusiasm in the interest of a good school health organization.

The cost in dollars is negligible when compared with the total educational budget for the local district. Small schools need little more than a part-time well-trained school nurse; two or nore country schools can consolidate their expenditures and acquire a nurse to serve the territory. The perennial complaints by educators and physicians alike, that the lay public is unwilling to support a comprehensive program are based on wrong assumptions. Admittedly our whole educational system is suffering from public indifference to changing school needs, an indifference manifested by insufficient appropriations to meet higher costs of accepted procedures and additional allotments for newer and broader functions. However, this cannot be considered a realistic American philosophy. The fact is that the American people readily and actively approve and support any project the needs and merits of which are presented in a manner they can comprehend. In my estimation administrators have been spending too much time and energy emphasizing poor budgets and too little effort stressing the services they are now rendering and the important benefits achievable under a more liberal per capita outlay.

This is neither the place nor the time to go into the details involved in a sound school health service program. Also it would be superfluous. Practically every physician regardless of individual professional interest has had some contact with this service either as a parent or as a medical adviser or both. The reason for this is obvious: While comparatively few schools can boast of a good health service, each elementary school and each high school is constantly facing problems dealing with health. Until now most local school administrators for understable causes have kept at an uncomfortable distance from the medical profession, seeking technical advice only when specific events threaten an individual pupil, or in the event of an epidemic threatening the whole school district. Physicians for their part in modesty and sensitiveness generally have kept aloof waiting to be invited. As a result very little or nothing has been done in spite of the fact that educators and physicians have not only a mutual interest but also a mutual obligation in the field of school health. Each group expressed criticism of the other. Some physicians have felt that the schools are not doing enough. Others not infrequently in the same district assert that the schools are meddling in the practice of medicine. The educators on their guard have likewise maintained an attitude that the doctors are interfering by trying to run the show or that the medical profession is uncooperative. Unfortunately these conflicting attitudes at times found justification.

That there is room for differences of opinion on principle and procedure in the school health service must be recognized by both sides. The physician and the educator both working in the interests of the pupil evaluate his welfare from different angles. As an example let us take the daily problem of absenteeism. Both sides agree that a child who is acutely ill cannot and should not attend school. However, when we come to the child who repeatedly absents himself because of parental anxiety over real or immaginary chronically poor health, who better than the family physician can be the judge as to the necessity for the child's staying out of class? In making his decision the doctor is expected to understand that absenteeism retards not only the scholastic progress of the pupil himself but also reflects itself in adverse morale of the whole class. Again, who better than the family physician can decide whether or not sitting in the classroom is more, or less deleterious to the pupil's health than his squirming around in the waiting room of the doctor's office?

This is only one of the many problems which are common to the school and the physician alike. There are many others as important and some carry implications in which the welfare of the entire community has a keen interest. Chief among these probably is the question — Under what conditions in the event of an epidemic should schools be closed? What is an epidemic, and how much does closing of school help check its spread? How much and what type of recreation best serves the interests of each group in the school population? There are innumerable problems relating to school health which educators are seeking to solve with the aid of the representatives of the medical profession.

It is now 40 years that education and medicine have gotten together on the national level through the creation of the Joint Committee on Health and Education with delegates appointed by the National Education Association and the American Medical Association. This Committee meets once a year to discuss problems and policies of school Health Service. The result has been the accumulation of data on practically all phases of school health and methods by which this service to our schools may be constantly improved. As a member of this Joint Committee representing the American Medical Association, I may say in all sincerity that though each side is inclined to consider the problems discussed in the light of its own perspective, the three-day sessions it was my privilege to attend in Washington in March, 1950, and in Chicago in 1951 were as harmonious as they were instructive. Educators and physicians from all parts of the country gathered not for the purpose of quibbling but for a discussion of school health service in which Education and Medicine have a mutual interest and a mutual responsibility. On the national level I am convinced there is good coordination and excellent understanding on the part of both organziations.

There is no justifiable reason why physicians in their own communities cannot reach the same degree of cooperation from the local school authorities. At the present time the trend toward creation of health councils is nation-wide, and there is no better medium than such a council by which school health services may find encouragement. The Educators welcome our professional interest and guidance.

The Complaint of the Patient*

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The complaint of the patient may be considered a verbal symbolization of distressing dysfunction of the individual as a whole or of a part or parts of the body. Because complaints are largely verbalized, even a dysfunction of a single organ must have its distressing nature described by word symbols which will vary according to the educational and personal background and make-up of the complaining individual. The complaint may be considered a protest on the part of the body or a failure in some manner of the adaptive mechanism. Such a failure may be based on a localized organ pathology or may be a protest to some difficult life situation or personal problem.

In the study of any clinical problem the initial facts are given to us in the nature of a complaint and the subsequent history-taking is an attempt to evaluate the complaints as given. The history-taking of a patient should be approached by a scientific method. First of all, we must have the presenting facts, which are the initial complaints. Next, these facts are studied in an effort to discover the situation under which they developed. Then there is an evaluation of the past record and family history.

This study of the patient's complaint is not solely of psychiatric interest but should be shared by those who have a broad interest in patients and in what might be termed "illness."

The purpose of this paper is to present a report on the spontaneous complaints of University of Nebraska Hospital patients, 170 consecutive surgical and 84 consecutive medical patients who were interviewed on the wards in January and February, 1950, and October and November, 1950, respectively. An evaluation of the complaints will be made and the results considered. A follow-up study and analysis of results are included.

METHOD

The method employed was to elicit by questioning the spontaneous complaints of successive admissions to the hospital on the surgical and medical wards. These included all the surgical sub-groups such as orthopedic, gynecological, urological, ear, nose and throat, and eye services. The medical cases included all sub-groups also, i.e., neurological, dermatological, et cetera. A series of questions were asked and the answers to these questions were written down verbatim. The questions used were as follows:

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*Presented at the meeting of the Nebraska Society of Neurology and Psychiatry, March 14, 1951, Omaha, Nebraska.

1. What sort of difficulty brings you to the hospital?
2. In what ways do you feel ill?
3. In what other ways do you feel badly?
4. What other complaints do you have?
5. How are you affected by your illness?

These questions were repetitious and exhaustive but were asked in the hope of obtaining a spontaneous expression of the complaint. Any elaboration was written down and spontaneous remarks were also listed. One other question was also asked, "Do you have any feeling of your own as to the nature of your trouble?" This was put in out of curiosity to see what sort of formulations a patient might make. Also recorded were the patient's name, the date of the interview, and diagnosis, and disposition of the case.

Another study conducted separately from the original was a follow-up study. To each of the patients originally seen a letter was written expressing an interest in the effects of the various forms of treatment at the University Hospital, asking the patient to advise us of his present status on a form which was enclosed. A self-addressed, stamped envelope was included in the letter. This enclosed form was as follows:

Complaints I have now ______________________
Complaints that are better because of my treatment at the University Hospital ________________ ___________________________
(If not well) I think the cause of my trouble is__ ___________________________

RESULTS

As a result of these interviews, a wide variety of complaints were elicited from which some idea of symptom profile can be made. These complaints are listed in Table I, which shows the most common complaint is that of pain, with weakness, backache, and headache following in that order. The lesser complaints are familiar ones and quite varied. As noted in the figure, the percentages in each group are closely correlated. Pain is not quite as high in the medical groups as in the surgical, and nervousness is almost twice as common in the medical group as in the surgical.

TABLE I.
COMPLAINTS

	Surgical: 170 %	Medical: 84 %
Pain	61	50
Weakness	19	21
Backache	18	17
Headache	15.5	22
Dizziness	8	7
Nervousness	7.5	14
Nausea	6	7
Tiredness	5	9
Constipation	4.75	5
Vomiting	4	1
Fear of Cancer	3.5	2
Diarrhea	1	1
Shortness of Breath	0	3.6

In a review of the 170 surgical cases, 3 of the patients who were interviewed later died. These surgical patients could be divided into two groups. In the first group there are patients with complaints that are clear, definitive, and related to a specific organ or system of organs, which on the figures is termed "clear." This group numbers 97. In a second group are cases in which the complaints are classified as multiple, that is, involving more than one area of the body, and in which some of the complaints can hardly be considered related to a given pathological process. In this group, which we have termed "complaintive," there are 73 cases.

Of the total of 84 medical cases, 3 died. Fifty-eight of these cases were classified as being clear, 26 as complaintive. This separation was more difficult than that of the surgical cases because of the nature of the patients. Most of these patients were quite old and had several types of organic pathology seemingly unrelated.

In Table II we can compare the complaints of the medical and surgical groups, each of these being subdivided into "clear" and "complaintive." Pain, of course, is the outstanding complaint. However, in the complaintive groups of both the surgical and medical subdivisions it is seen that the symptoms of weakness, backache, headache, dizziness, nervousness, and nausea particularly are much higher in the complaintive group than they are in the relatively clear group. It is interesting to note that in the medical group 31 of the 84, or 35 per cent of the cases, knew their diagnosis. They had had enough medical experience to symbolize their complaint medically.

TABLE II

	Surgical		Medical	
	97 % Clear	73 % Complaintive	58 % Clear	26 % Complaintive
Pain	53	71**	43	65
Weakness	7	33*	19	26
Backache	14	22	8.5	38*
Headache	7	26***	8.5	53.5*
Dizziness	5	12	6.7	7.4
Nervousness	0	17*	1.7	42*
Nausea	5	8	1.7	5
Tiredness	0	6.8	10	7.6
Constipation	5	9	1.7	11
Vomiting	4	2.6	1.7	0
Fear of Cancer	1	6.8	1.7	3.8
Diarrhea	0	2.6	1.7	3.8
Diagnosis	0	0	41	26
Shortness of Breath	0	0	12	15
Fear of Veneral Disease	0	0	0	3.8

* Significant at 1% level of confidence.
** Significant at 2% level of confidence.
*** Significant at 5% level of confidence.

In the follow-up of the surgical cases 78 patients returned the form as seen in Table III. Among the patients who had had surgery there were over 50 different types of surgical procedures. As seen in the figure, of those who had surgery for complaints "clear" in nature, a larger group were non-complaintive following treatment. However of those who were "complaintive," a larger group remained complaintive. Fifteen of the 78 spontaneously praised the hospital.

TABLE III
SURGICAL FOLLOW-UP
78 Returns

Had Surgery:	57
Clear	33
Follow-up:	64% Clear
	36% Complaintive
Complaintive:	24
Follow-up:	37% Clear
	63% Complaintive
No Surgery:	21
Clear:	7
Follow-up:	58% Clear
	42% Complaintive
Complaintive:	14
Follow-up:	28% Clear
	72% Complaintive

Of the 84 medical cases, there were 35 blanks returned. In Table IV are seen rather disappointing results, most patients continuing to have complaints. Pain was the outstanding complaint in the follow-up of the medical group with nervousness running a close second. From this study it is seen that the results of medical therapy in this group are not nearly as good as that of surgical.

TABLE IV
MEDICAL FOLLOW-UP
35 Returns

Clear:	23
Follow-up:	39% Clear
	61% Complaintive
Complaintive:	12
Follow-up	25% Clear
	75% Complaintive

A word of explanation is essential in considering the medical study. Most of the patients are in the old age group as previously mentioned and had much organic pathology. If the ward were an acute medical ward with younger patients the results would have been much different. The multiplicity of complaints might also be related to the method of questioning, in which an attempt was made to elicit all complaints. An example of one patient who had a multiplicity of complaints was a 70-year-old man who had the following diagnoses: (1) leukoplakia of the tongue; (2) cerebro-spinal lues; (3) luetic optic atrophy; (4) bronchial asthma; (5) chronic emphysema; (6) chronic sinusitis. It was not at all uncommon to find patients with at least two and more often three diagnoses.

DISCUSSION

In our study of the complaint problem, we first selected cases from the surgical ward in the belief that these cases represent a group of patients whose pathology would be more or less discrete and related to definitive clinical problems. In the cases from the eye and orthopedic services, we found that this was particularly true. In a sense, these cases might be considered a control group, which can be used to advantage in evaluation of the complaints from patients on other services.

In this study, a point of special interest is that patients whom we ordinarily consider as having some definite pathology are cases who may have a number of complaints some of which are not related to the main pathological process. These additional symptoms are usually neglected, but it is our belief that they cannot be excluded parenthetically. Instead, they must be considered as part of the patient's total problem in illness. Too often patients who present multiple complaints are passed off as psychoneurotic because some of the complaints do not enter into the clinical syndrome under consideration. At times it is diffcult to de-

(Continued on page 344)

LIBRARY OF THE
COLLEGE OF PHYSICIANS

Amoebiasis in Nebraska

GEORGE W. KELLY, Parasitologist, and
L. O. VOSE, Director of Laboratories
Division of Laboratories
Nebraska Department of Health
Lincoln, Nebraska

Contrary to popular belief, amoebiasis cannot be considered primarily a tropical disease. In fact, scientific literature indicates a world wide distribution, climate being more of an influencing than a limiting factor. It is even probable that food and sanitary customs more directly affect the nature and incidence of the disease than does the mean annual temperature. A few representative figures on the incidence of the Endamoeba histolytica infections are quoted as illustrations.

TABLE I

Locality and Group	Authority	Year	Percent Positive
Panama, River Villages	Faust	1931	33.0 to 72.7
Panama, White Personnel, Canal Zone	Faust	1931	2.8 to 8.6
Chicago, Food Handlers	Bundesen, et al	1933	23.6
Physicians, U.S.	Craig	1932	12.7
San Francisco, Food Handlers	Johnson & Iverson	1935	2.9
Georgia, Mental Hospitals	Reardon	1941	40.0
Pennsylvania, Food Handlers	Wenrich & Arnett	1942	11.1

Knowledge of the incidence of infection with E. histolytica in Nebraska is meager. It is the purpose here, to present and discuss evidence resulting from examinations of specimens in the Department's laboratories.

This laboratory has examined stools from several persons who were reportedly harboring E. histolytica. Several times only nonpathogenic amoeba were found in these stools and E. histolytica could not be found. This illustrates the importance of laboratory work by one who does enough of this type of work to make specialization possible.

The finding of E. histolytica cysts in bowel discharges is not enough to prove an active case. Clinical evidence of amoebae incited pathology must also be present. Vague and indefinite nature of symptoms often may make this difficult. The authors recently knew of two such cases. Both were women in their late twenties and both had as a chief complaint, pain in the lower abdomen. Neither had any dysentary. Instead, they both had periods of constipation. After radiological examination and numerous clinical tests, one physician finally concluded that the symptoms of one of these patients were psychosomatic and out of his realm of treatment. When examined by another physician, a stool specimen was submitted in which numerous cysts of E. histolytica were found. After a course of therapy this woman recovered and the pain ceased. The other case was detected by a routine examination which had not been requested by her physician Her symptoms disappeared after treatment and her general health showed marked improvement. As is often the case, several members of this womans' family were likewise found infected with the parasite.

It is interesting that during the period of 1945 to 1950, seventy-eight cases of amoebiasis and seventy-one cases of typhoid fever were officially reported in Nebraska. Considering the more protean nature of symptoms of amoebiasis and greater alertness and ease of laboratory confirmation of typhoid fever, it is probable that clinical cases of amoebiasis in the state outnumber those of typhoid fever more than reported cases would indicate.

Frequently only cysts are found in discharges of symptom-free carriers and in cases not exhibiting dysenteric symptoms. Only trophozoites are usual in those individuals who have amoebic bowel lesions with accompanying diarrhea and until recent years this necessitated a freshly passed warm stool for diagnostic laboratory work in the latter type infections. In such cases it is necessary for the patient to be in close proximity to the laboratory, thus greatly limiting activities in this field by most public health laboratories.

A relatively simple method, employing a fixative developed by the U.S.P.H.S. was announced in 1948. This makes it possible for specimens containing trophozoites, as well as those containing cysts, to be examined by a laboratory distant from the source of the specimen. The main requirements are that a simple process of preparation be applied to the freshly voided liquid stool. With a suitable outfit, a physician or an intelligent patient, by using a fresh warm stool, may prepare the specimen by simply following directions. Because of the relatively rapid disintegration of trophozoites in a specimen, it is essential that this preparation be made very soon after the specimen is passed.

This method involves the use of "Evanol," a polyvinyl alcohol plastic, which is mixed with Schaudin's fixative solution. A portion of the fresh specimen about the volume of a pea is mixed in a vial containing 2 ml of the fixative solution. The laboratory prepares specimens from this and usually stains them with iron-hematoxylin. Greater parasitological skill is needed in the examination of these specimens than is the case if cysts only are under consideration. Specimen outfits furnished by the laboratory for stool parasitology usually consist of a jar for unpreserved feces which is used for cysts and ova and a vial which contains a special fixative for trophozoites. In many instances it is possible to obtain an unpreserved portion of formed stool which can be examined for cysts and a liquid portion which can be placed in the preservative. This often aids in arriving at a positive identification since both cysts and trophozoites are available for observation. Any diarrheal stool submitted for parasitological examination should be preserved in this fixative.

The effect greater emphasis and improved methods are having on recognized amoebiasis was emphasized by Dr. Willard Wright, U.S.P.H.S., as stated in the February issue of the Journal of Parasitology:

> "In spite of our much vaunted high levels of sanitation, amoebiasis appears to be on the increase. Cases reported to the Public Health Service for the calendar year 1949 represented an increase of more than 62 per cent over the median number reported yearly between 1944 and 1948. For the first time the number of amoebiasis cases exceeded the number of malaria cases. The total of reported amoebiasis cases was greater than the number reported for each of the following diseases: brucellosis, conjunctivitis, infectious encephalitis, malaria, meningococcal meningitis, rheumatic fever, Rocky Mountain spotted fever, smallpox, tetanus, trachoma, trichinosis, tularemia, typhoid fever, para-typhoid fever, and endemic typhus. . . If we are to make any progress in the control of this and other intestinal protozoal infections, we must know something more about the epidemiology and manner of spread."

Recently received specimens examined by the Department's laboratories may, for our purposes here, be divided into three classes; 1—Diagnostic specimens from physicians in which a diagnosis of amoebiasis is under consideration; 2 — Survey specimens from residents of an established irrigation area (Scotts Bluff County) in which emphasis is placed on residence in the area; 3—Specimens from food handlers who are all presumably healthy individuals. Results secured on such specimens are tabulated herewith.

TABLE II

Class of Specimens	No. of Specimens	Postive for % Columns			
		E. Histolytica	E. Coli	Giardia Lamblia	Endoliman Nana
Diagnostic	61	7(11.5%)	8(13.1%)	2(2.1%)	3(4.9%)
Survey	612	21(3.4%)	91(14.0%)	6(1.0%)	18(2.9%)
Food Handler	133	5(3.7%)	30(22.0%)	4(3.0%)	4(3.0%)
Total	806	33(4.1%)	129(16.0%)	12(1.4%)	25(3.1%)

An attempt was made to eliminate repeat specimens from the above tabulation. Figures in the main are based on a single specimen per individual. Positive results would undoubtedly be higher had several specimens per individual been examined.

It may be noted that there is no significant difference in the incidence of E. histolytica infections between the irrigation area survey group and the food handler group. If the percentage of infections found in the two groups of presumed normals were applied to the state's population it would indicate approximately 45,000 histolytica carriers. This might be compared with an estimated 100 typhoid carriers; to approximately 0.5% of probable syphilis in the population as indicated by positives secured on premarital and prenatal blood specimens; and to an approximate 0.2% of active tuberculosis as indicated by the results of the Department's chest X-ray activities.

But little can be said here as to the significance of this infection to the individual. Craig has estimated that approximately half of the histolytica carriers exhibit symptoms of infection. Perhaps it would be wise to consider the infected person as a source of potential spread to others and also as one who may at any time develop acute symptoms.

SUMMARY AND CONCLUSION

Sufficient information of the laboratory examinations has been presented to indicate that amoebiasis is an important medical and public health problem in the state. It is considered worthy of greater attention.

Physicians in diagnostic practice are urged to be alert to the possibilities of amoebic infection and to make adequate use of laboratory facilities in this field.

Those in public health and others promoting sanitation, are urged to emphasize practices of a type that would give maximum protection against the spread of amoebic cysts rather than against bacterial pathogens only.

Dogs, cats, and farm animals are sometimes unintentionally fed better than many children. As a result, many youngsters suffer from hypoproteinosis, a deficiency disease caused by insufficient proteins in the daily diet, according to the (Sept. 8) Journal of the Amercan Medical Association.

Parents must learn "that it is not how much the child eats but what he eats that is essential to his nutritional well-being," according to the authors of the article, Drs. Harold D. Lynch and William D. Snively, Jr., of Evansville, Ind.

The Nebraska State Medical Journal

Sharp Building, Lincoln, Nebraska

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Subscription $2.50 Per Year. Single Copies 35c Each

The Publication Board does not assume responsibility for opinions expressed in original articles published in this Journal.

Manuscripts should by typewritten, double-spaced, and the original, not the carbon, submitted.

Reprints should be ordered from the printer, The Huse Publishing Co., Norfolk, Nebraska.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

Vol. 36 October No. 10

THE A.M.A. TWELVE POINT PROGRAM

1. Creation of a Federal Department of Health of Cabinet status with a Secretary who is a Doctor of Medicine.
2. Promotion of medical research through a National Science Foundation with grants to private institutions which have facilities and personnel sufficient to carry on qualified research.
3. Further development and wider coverage by voluntary hospital and medical care plans to meet the costs of illness, with extension as rapidly as possible into rural areas.
4. Establishment in each state of a medical care authority to receive and administer funds with proper representation of medical and consumer interest.
5. Encouragement of prompt development of diagnostic facilities, health centers and hospital services, locally originated, for rural and other areas.
6. Establishment of local public health units and services.
7. The development of a program of mental hygiene with aid to mental hygiene clinics in suitable areas.
8. Health education programs administered through suitable state and local health and medical agencies to inform the people of the available facilities and of their own responsibilities in health care.
9. Provision of facilities for care and rehabilitation of the aged and those with chronic disease and various other groups not covered by existing proposals.
10. Integration of veterans' medical care and hospital facilities with other medical care and hospital programs and with the maintenance of high standards of medical care.
11. Greater emphasis on the program of industrial medicine.
12. Adequate support with funds free from political control, domination and regulation of the medical, dental and nursing schools and other institutions necessary for the training of specialized personnel required in the provision and distribution of medical care.

Organization Section

POST-GRADUATE EDUCATION

Continuous medical education courses on the local level, a program long sought and often requested by members of the Nebraska State Medical Association, will become a reality in December of this year.

Your Speakers Bureau Committee, headed by Dr. R. O. Garlinghouse of Lincoln, has made these local post-graduate courses its major 1951-52 project. The committee has taken this action in recognition of the members' desire that such courses be sponsored by their state medical organization.

Plans are about complete for the 1951 courses, which will become an annual event if sufficient interest is shown in them. According to present plans, the courses will begin on Monday, December 3, and will continue through Saturday, December 8. The courses will be held in six different towns, in all parts of the state. Committee members were unanimously of the opinion that if the meetings "were taken" to the members they would serve a more useful purpose and would have greater chance for success.

Following are the towns and dates where meetings will be held, providing, of course, that they are desired by the local physicians:

Beatrice	December 3
Norfolk	December 4
Grand Island	December 5
McCook	December 6
North Platte	December 7
Scottsbluff	December 8

The Guest Faculty will be composed of four physicians, all of whom are coming to Nebraska from out of the state. Three of them have already accepted, and an answer is expected shortly from the fourth. Names of the Guest Faculty will be published shortly.

The courses to be offered are in cancer, cardiology, obstetrics, pediatrics and ACTH. Each of the Guest Faculty members is renown in one of these fields. In addition to the scientific papers, a patient clinic will be held each afternoon, with local physicians invited to bring patients to the clinics.

Your Speakers Bureau Committee requests that you mark your calendar for the above dates and make your plans now to attend one of these exceptionally fine courses. Additional information will be sent you in the bulletins and the Organization Section.

PHYSICIAN SUPPLY

One of the cardinal tenents used by the proponents of federal aid to medical education is that there already is a physician shortage and that it will become more acute in just a few years unless medical education is expanded through federal subsidy to colleges of medicine.

It has been estimated that America will have a deficit of 22,000 doctors by 1954 if the facilities for training doctors are not materially expanded. The supporters of socialized medicine, also backing the plan for federal assistance to the nation's medical schools, are vociferous in their condemnation of the distribution of doctors. They blame it all on the alleged "shortage."

Frank Dickinson, Ph.D., economist and statistician of the American Medical Association, takes just the opposite view. He feels that in a few years there may be an over supply of doctors: "As a result of present trends in the increase of productivity of physicians, we are more likely to have a surplus of physicians in the United States in the nineteen sixties than we are to have a deficit."

Dr. Dickinson asserts that between 1940 and 1950 physicians increased their productivity by at least one-third. He said: "The tremendous changes in medical practice wrought by the introduction of the wonder drugs, the expanded use of auxiliary personnel by physicians and the increase in the percentage of patients treated in the office and in the hospital, rather than in the home, have combined greatly to increase the technological efficiency of physicians."

The socialists argue further that in some communities there is no resident physician at all. Dr. Dickinson points out here that these communities are usually very small and do not have the other services and facilities of larger towns. He notes that people in the smaller towns obtain their medical care from the same "trade areas" where they are accustomed to buying their regular daily needs.

Dr. Dickinson's final argument for freedom in medical education should be conclusive: "Our medical schools at present and the other schools that train auxiliary medical personnel have made possible enough medical services to provide the American people with the highest level of health of any large nation and even above that of some of the smaller, traditionally healthiest nations . . . We have had enough physicians to achieve a truly remarkable record of health progress."

This information is submitted in order that you will have a "starting point" from which to elaborate your opinions on the subject when discussing it with your patients and friends.

President D. B. Steenberg has announced the appointment of the following on the Diabetes Committee: Drs. Morris Margolin, Chairman, Omaha; C. R. Hankins, Omaha; Maurice Pepper, Omaha; S. Rathbun, Beatrice; Floyd Rogers, Lincoln, and Ben Slutzky, Omaha.

The committee met in Lincoln on September 13. The procedure followed last year, namely free urine testing program, was adopted again this year in view of the favorable results obtained. The component organizations are being requested to establish local committees for the implementation of the program. The Speakers Bureau is cooperating by providing speakers for professional and lay meetings.

FREEDOM FOR ALL

"The answer to the problem of medical care will not be found in a political panacea or through the development of a super bureaucracy. The answer to the problem will be neither simple nor easy, but it will be found within the framework of our present economic system and our present constitutional safeguard."

That wasn't said by a spokesman for the medical fraternity. Instead, it was recently said by one of the most aggressive labor leaders in the country—Dave Beck, Executive Vice President of the International Brotherhood of Teamsters. He then added, "The answer as proposed by advocates of government-controlled medicine is contrary to our economic structure and goes beyond our traditional guarantees. Any system which proposes such modifications in our way of living and doing things would lead to a dangerous socialistic trend and cannot be tolerated. Such a system would destroy our liberty."

It is often argued that those who oppose socialized or government-dominated medicine are sinister representatives of special interests, who have no concern for the problems of the "common man." That certainly doesn't apply to Dave Beck, who fights hard for what he considers the rights of labor. But, in company with a growing number of other labor leaders, he knows that socialism detroys free labor just as it destroys free enterprise.

—(From Sidney, Nebr., Telegraph)

Announcements

Anyone wishing to read a paper at the Annual Session May 12, 13, 14 and 15, 1952, should get your name and title to R. B. Adams, M.D., 1315 Sharp Building, Lincoln 8, Nebraska. No requests will be accepted after February 1, 1952.

The Nebraska Chapter of the Academy of General Practice has scheduled a social hour and dinner in the ballroom of the Paxton Hotel for 6:00 p.m., October 28th, preceding the opening of the Mid-West Clinics. All members, doctors who are interested in the Academy, and wives are invited to attend.

OCTOBER CRIPPLED CHILDREN'S CLINIC

October 13—O'Neill, High School, W. R. Hamsa or L. S. Campbell and Herman Jahr.

October 27—Ogallala, High School, C. Fred Ferciot or W. W. Bartels and John L. Gedgoud.

The Forum on Fundamental Surgical Problems, designed to bring out the best of what is new in surgery and give younger surgeons doing original work a chance to be heard, constitutes one of the most interesting portions of the program for the thirty-seventh Clinical Congress of the American College of Surgeons to be held in San Francisco. The Forum begins on Monday afternoon, November 5, and continues through Friday, November 9, with twelve sessions in all. Dr. Owen H. Wangensteen, professor of surgery, University of Minnesota Medical School, is Forum chairman.

Included are sessions on orthopedic surgery; surgery of the heart; plastic surgery of burns and wounds; neurosurgery; ACTH, adrenals and wounds; stomach, pancreas and thyroid; urology; heart and great vessels; liver and portal system; surgery of the lungs and esophagus; bowel and pancreas, and thrombo-embolism and shock.

Postgraduate study primarily designed for the general practitioner will be the theme of the 1951 Clinical Session of the American Medical Association to be held in Los Angeles, Dec. 4 through 7.

"Therapy will be stressed in a broad presentation of clinical studies on problems the general practitioner meets in daily practice," Dr. George F. Lull of Chicago, secretary and general manager of the A.M.A., stated. "Subjects of interest to the specialist will also be presented."

The four-day scientific program will include discussions and presentations on urology; general practice; general surgery; cardiovascular diseases; industrial medicine and surgery; eye, ear, nose and throat diseases; diseases of the chest, and neuropsychiatry.

Others will be on medical banks, radiology, anesthesia and pathology, traumatology as related to civil defense, obstetrics and gynecology, dermatology, internal medicine and pediatrics.

THE OMAHA MID-WEST CLINICAL SOCIETY

Nineteenth Annual Assembly
October 29, 30, 31, November 1, 2, 1951
Hotel Paxton — Omaha, Nebraska

PROGRAM

MONDAY MORNING, OCTOBER 29th

8:30 a.m.—Registration.

9:45 a.m.—"The Heart: Electrokymography, Venous Catheterization and Angiocardiography." (Motion Picture).
"Urinary Infections: Bacteriology, Pathology and Treatment." (Motion Picture).

CONVENING OF THE NINETEENTH ANNUAL ASSEMBLY

11:15 a.m.—Opening Remarks by Alfred J. Brown, President.

11:20 a.m.—"Heart Failure," Louis N. Katz, Chicago, Illinois, Director, Cardiovascular Department, Michael Reese Hospital.

12:00 Noon—"Treatment of Anuria and Oliguria," Arthur Grollman, Dallas, Texas, Professor and Chairman of the Department of Experimental Medicine, Southwestern Medical School of the University of Texas.

12:40 p.m.—Visit the Exhibits.

1:00 p.m.—Buffet Luncheon. Discussion—"Dynamics of Hypertension." Leader, Louis N. Katz.

MONDAY AFTERNOON

2:30 p.m.—"Diagnosis of Endocrine Disorders," Arthur Grollman.

3:30 p.m.—To be announced.

4:30 p.m.—"Coronary Atherosclerosis," Louis N. Katz.

5:30 p.m.—Visit the Exhibits.

6:15 p.m.—Dinner. Discussion.
Leader, Franklin L. Payne.

MONDAY EVENING

8:15 p.m.—"Recent Developments in Cardiovascular Diagnosis," Louis N. Katz.

8:45 p.m.—"Use and Abuse of Drug Therapy in General Practice," Arthur Grollman.

9:15 p.m.—

TUESDAY MORNING, OCTOBER 30th

8:15 a.m.—"Urinary Infections: Bacteriology, Pathology and Treatment."

9:00 a.m.—

9:40 a.m.—"Indications for Surgery in Diseases of the Prostate Gland," Vincent J. O'Connor, Chicago, Illinois, Professor and Head of the Department of Urology, Northwestern University Medical School.

10:20 a.m.—"Management of Fractures of the Upper Extremity in Children," Harold B. Boyd, Memphis, Tennessee, Associate Professor of Orthopedic Surgery, University of Tennessee College of Medicine.

11:00 a.m.—Visit the Exhibits.

11:15 a.m. to 12:50 p.m.—Lectures:
"Stress Incontinence," Thomas D. Boler.
"Diagnostic Bronchoscopy," Oscar Carp.
"Pneumoperitoneum Treatment of Pulmonary Tuberculosis and Pulmonary Emphysema, Max Fleishman.

"Major Complications Associated with Removal of Teeth," Harry N. Boyne.

"Management of Hemorrhage from the Gastrointestinal Tract," Ben Slutzky.

"Liver Therapy: Its Uses and Abuses," Charles Frandsen.

"The Value of Peritoneoscopy in the Diagnosis of Obscure Abdominal Conditions," John C. Kennedy.

"How to Avoid Trouble in Surgical Management of Acute Cholecystitus," Louis D. McGuire.

"Management of Leukorrhea," David Findley.

"Management of Complications During the Third Trimester of Pregnancy," John J. Grier.

"Hypoxia in Poliomyelitis, or 'Give 'Em Air'," J. Harry Murphy.

"Treatment of Rheumatic Fever in Children," Joseph A. Henske.

1:00 p.m.—Buffet Luncheon. Discussion—"Fracture Problems." Leader, Harold B. Boyd.

TUESDAY AFTERNOON

2:15 p.m.—Presentation of Scientific Awards; Chairman, Scientific Exhibits Committee, Richard L. Egan.

2:30 p.m.—Clinic—"Injuries of the Genito-Urinary Tract," Vincent J. O'Connor.

3:30 p.m.—"Disabilities of the Hip in Children and Adolescents," Harold B. Boyd.

4:30 p.m.—"The Use of Adrenal Cortical Steroids and Anterior Pituitary Adrenocorticotropic Hormone in the Treatment of Rheumatic Diseases," Edward Ward Boland, Los Angeles, California, Assistant Professor of Clinical Medicine, University of Southern California School of Medicine.

5:30 p.m.—Visit the Exhibits.

6:15—Dinner. Discussion—"Treatment of Urinary Infections." Leader, Vincent J. O'Connor.

TUESDAY EVENING

8:15 p.m.—"Orthopedic Care of the Wounded in the Far East Command," Harold B. Boyd.

8:45 p.m.—"Psychogenic Factors in Rheumatic Diseases," Edward Ward Boland.

9:15 p.m.—"Carcinoma of the Bladder," Vincent J. O'Connor.

WEDNESDAY MORNING, OCTOBER 31st

8:15 a.m.—"The Heart: Electrokymography, Venous Catheterization and Angiocardiography." (Motion Picture).

9:00 a.m.—"Practical Management of Rheumatoid Arthritis," Edward Ward Boland.

9:40 a.m.—"Surgical Treatment of Peptic Ulcer," George Crile, Jr., Cleveland, Ohio, Surgeon, Cleveland Clinic Foundation Hospital.

10:20 a.m.—"Dizziness," Lawrence R. Boies, Minneapolis, Minnesota, Professor of Otolaryngology and Director of the Division of Otolaryngology, University of Minnesota Medical School and Graduate School.

11:00 a.m.—Visit the Exhibits.

11:15 a.m. to 12:50 p.m.—Panel Discussions—

"Diagnosis and Treatment of
Dermatologic Diseases"
Donald J. Wilson, Chairman

Participants: William E. Kelley, Zeno N. Korth, Donald J. Wilson.

"Fractures and Orthopedic Problems"
Werner P. Jensen, Chairman

"Diagnosis and Treatment of the Knee Joint," William R. Hamsa.

"Indications for Intramedullary Nailing," James W. Martin.

"Element of Time in the Healing of Fractures," Robert D. Schrock.

"Indications for Spinal Fusion in Low Back Complaints," Chester H. Waters, Jr.

"Interpretation of Roentgenograms"
D. Arnold Dowell, Chairman

"Cardiovascular Diseases," Ralph C. Moore.

"Pulmonary Diseases," Francis L. Simonds.

"Gastrointestinal Tract," James F. Kelly.

"Urinary Tract," T. Tennyson Harris.

"Bone Tumors, Differential Diagnosis," Howard B. Hunt.

1:00 p.m.—Buffet Luncheon. Discussion—"Problems in Diagnosis and Treatment of Rheumatic Diseases." Leader, Edward Ward Boland.

WEDNESDAY AFTERNOON

2:30 p.m.—"Treatment of Diseases of the Thyroid Gland" (with motion picture in color), George Crile, Jr.

3:30 p.m.—"Headache and Neuralgia of Nasal Origin," Lawrence R. Boies.

4:30 p.m.—"Renal Inflammatory Diseases in Children," Mitchell I. Rubin, Buffalo, New York, Professor of Pediatrics and Head of the Department, University of Buffalo School of Medicine.

5:30 p.m.—Visit the Exhibits.

6:15 p.m.—Dinner. Discussion—"Changing Trends in Surgery of the Colon." Leader, George Crile, Jr.

WEDNESDAY EVENING

8:15 p.m.—"Hoarseness," Lawrence R. Boies.

8:45 p.m.—"Renal Function in Infants and Children," Mitchell I. Rubin.

9:15 p.m.—"Bleeding Esophageal Varices," George Crile, Jr.

THURSDAY MORNING, NOVEMBER 1st

8:15 a.m.—"Urinary Infections: Bacteriology, Pathology and Treatment." (Motion Picture).

9:00 a.m.—"Hypocalcemic Conditions in Infants and Children—Etiology and Management," Mitchell I. Rubin.

9:40 a.m.—"Some Nutritional Factors in the Care of Patients," I. S. Ravden, Philadelphia, Pennsylvania, John Rhea Barton Professor of Surgery, School of Medicine, University of Pennsylvania.

10:20 a.m.—"Present Day Problems with Neurosyphilis," Roland P. Mackay, Chicago, Illinois, Professor of Neurology, University of Illinois College of Medicine.

11:00 a.m.—Visit the Exhibits.

11:15 a.m. to 12:50 p.m.—Lectures—

"The General Practitioner's Role in the Early Detection of Glaucoma," Robert H. Rasgorshek.

"A Survey of Leukemia in Nebraska," A. S. Rubnitz.

"Differentiation Between Causes of Atrophy of the Intrinsic Muscles of the Hand," A. I. Finlayson.

"Treatment of the Psychoses," G. Kenneth Muehlig.

"Use of Low Sodium Diets and Exchange Resins in the Treatment of Edema," John R. Kleyla.

"The Use of Sedative and Stimulative Drugs in the Treatment of Emotional Illnesses," Frank R. Barta.

"Chest Pains," R. Allyn Moser.

"Clinical Evaluation of the Wilkerson-Heftmann Blood Sugar Test, with Reference to Its Use by the General Practitioner," Morris Margolin.

"Abnormal Menopausal Bleeding," Leo T. Heywood.

"Use and Abuse of Endocrinotherapy in Obstetrics and Gynecology," J. Phil Redgwick.

"Immediate Care of the Newborn Infant," George E. Robertson.

"Modern Treatment of Erythroblastosis," John M. Thomas.

1:00 p.m.—Buffet Luncheon. Discussion—"Renal Disease in Children; Dehydration in Infants." Leader, Mitchell I. Rubin.

THURSDAY AFTERNOON

2:30 p.m.—"Some Problems of Biliary Tract Disease," I. S. Ravdin.

3:30 p.m.—"Clinical Neurology of the Spinal Cord," Roland P. Mackay.

4:30 p.m.—"The Financial Problems of Medical Education," Louis H. Bauer, Hempstead, New York, President-Elect, American Medical Association.

THURSDAY EVENING

OMAHA-DOUGLAS COUNTY MEDICAL SOCIETY NIGHT

8:15 p.m.—"The Epilepsies," Roland P. Mackay.

8:45 p.m.—"Radiation Injuries of Atomic Welfare, Pathogenesis and Therapy," E. P. Cronkite, Commander, M.C., U.S.N., Bethesda, Maryland.

9:15 p.m.—Clinic—"Management of Peritonitis of Appendiceal Origin," I. S. Ravdin.

FRIDAY MORNING, NOVEMBER 2nd

8:30 a.m.—"The Heart: Electrokymography, Venous Catheterization and Angiocardiography." (Motion Picture).

9:15 a.m.—Panel Discussion—"Blood Dyscrasias"

Louis R. Limarzi, Chicago, Illinois, Associate Professor of Medicine, University of Illinois College of Medicine.

T. Hale Ham, Cleveland, Ohio, Professor of Medicine, Western Reserve University School of Medicine.

Theodore L. Squier, Milwaukee, Wisconsin, Associate Clinical Professor of Medicine, Marquette University School of Medicine.

Maxwell M. Wintrobe, Salt Lake City, Utah, Professor of Medicine, University of Utah College of Medicine.

12:30 p.m.—Open Discussion.

1:00 p.m.—Adjourn.

News and Views

The Nebraska Medical Foundation, Inc., recently received $1,000 from the estate of the late Charles Skalla, McCook.

The money, as provided in the terms of the bequest, will be used in research relating to the cause, control and treatment of cancer within the state, according to Dr. Harold Morgan, Lincoln, foundation president.

A tentative draft of a rewritten nurse practice act was reviewed in Omaha recently by 20 nurse leaders from all parts of Nebraska.

A spokesman for the group said the purpose of rewriting the present law which goes back to 1909 is to license all those practicing nursing for hire and guarantee to the public that they are competent.

The group made the following recommendations:

1. That an advisory committee composed of members of allied groups be appointed.

2. That more information be given to nurses in Nebraska regarding the need for improved nursing laws.

Members of the Nebraska Multiple Sclerosis League met in Omaha in August to vote unanimously for a state chapter of the National Multiple Sclerosis Society.

After confirmation by the national body, Nebraska will become the second state in the Midwest (Minnesota is the other one) to have an effective organization.

With only the finishing touches remaining to be completed on Arcadia's $24,500 health center, the town is seeking a doctor to reside there and begin practicing.

The history of the health center dates back five years when Arcadia decided to do something about the lack of a doctor. A municipal bond issue of $11,500 was let, but this was insufficient to build a health center, so a private subscription campaign raised the balance of the money.

THE SEARCH FOR HIDDEN DIABETES; DIABETES DETECTION DRIVE

According to the best available estimates, there are about a million undiagnosed diabetics in the United States alone. In addition, approximately two million more individuals in this country are potential diabetics whose disease may become apparent as time goes on.

Some diabetes is a serious chronic disease which nevertheless is easily and inexpensively discovered, the American Diabetes Association has for the past three years sponsored and helped organize a continuous, nationwide Diabetes Detection Drive. The Drive is an important part of the case-finding and health education program of the American Diabetes Association and is sponsored and directly conducted by the medical profession working through local Medical Societies, in cooperation with public-spirited lay groups in each community.

Every year this Drive is renewed and inspired by a special proclaimed Diabetes Week, during which the medical profession in each participating community contributes its time and effort to the intensive screening of the local population for hidden diabetics.

During this special week the work of the physicians is actively supported by every important force in the community. State and local government authorities, health agencies, lay groups, fraternal societies, business, industrial, labor and professional organizations, all combine their efforts to make it possible for every person in the community to undergo the simple tests for a surplus of sugar in the urine which may mean diabetes.

For their part, all the people in a town or city which is cooperating in the Diabetes Week Drive are urged to take advantage of Diabetes Week to be tested for the presence of this disease—which, if not caught in time, might become a crippling illness for the rest of their lives.

A successful screening campaign during Diabetes Week requires no elaborate equipment and can be carried out with a minimum expenditure by using all volunteered local resources. It involves no public fund-raising. Rather it depends for its effectiveness on the organizational effort volunteered by the local medical profession and interested public agencies and lay groups.

DIABETES WEEK, NOVEMBER 11 - 17, 1951

Each year, a week in the fall is designated as Diabetes Week. Every person in a community which is cooperating in the Week should remember the dates and make every effort to get to his personal physician, a Testing Center, or a Teaching Center for Self-Testing for a diabetes test. All the members of the family, too, should be tested, and word about the Week should be spread among friends and business associates. If anyone has an undiagnosed case of diabetes, the screening will bring it to light now, before it has a chance to become more serious and harder to control.

RESULTS OF DIABETES WEEK, 1950

The Diabetes Detection Drive of the American Diabetes Association began its third year of activity with a nationally proclaimed Diabetes Week in November, 1950. As in the past campaigns, physicians, health agencies, press and radio outlets, both nationally and locally, brought before the people the urgent need for early discovery and treatment of the disease. Materials for over 1,500,000 urine tests were distributed by the Association to hundreds of cities and towns which were cooperating in the program. In these communities special Committees on Diabetes offered free tests to all comers, both in doctors' offices and in specially organized Testing Centers.

It was found, in general, that the proportion of newly discovered cases of diabetes to the total number of people tested ran between half and one per cent. Of a group of 212,191 individuals tested, for example, 1,242 were found to be new diabetics. This proportion seems to tally closely with those found in previous Drives and indicates the importance of further mass-scale detection programs.

Some states reported that their 1950 campaign showed a considerable increase in effectiveness over previous years. In Connecticut, for example, a total of 20,023 urine specimens were reported tested during Diabetes Week, an increase of 7,758 (63.3%) over the previous year's totals. According to the report from that state, more than 500 positive urine specimens were found, more than half of them being from people who were not previously known to be diabetic. The Connecticut data indicated an incidence of 2.5% of glycosuria among those tested, a figure which points to the definite desirability of annual urinalyses of all adults.

SELF-TESTING

The principle of self-testing was approved by the American Diabetes Association in 1949 and by the American Medical Association in 1950 at its San Francisco convention. It is possible for the individual to test himself periodically for glycosuria, and many have done so in the past, by using a home-testing unit. In many communities self-testing programs will be carried on as part of the Diabetes Detection Drive during Diabetes Week.

Know Your Blue Shield Plan

Though benefits for polio care are not specifically mentioned in the Blue Cross-Blue Shield membership certificates, it should be kept in mind that all regular membership benefits are provided to members who receive hospital and medical care for polio.

Membership in Blue Cross-Blue Shield is being offered on a virtually unrestricted basis this month. During October, Non-Group membership is available to any person under age 65, regardless of employment status. (Ordinarily, Non-Group membership is offered only to persons who work where there are fewer than four employees). Newspaper ads with coupons and radio spot announcements are being used to publicize this special offering. All physicians have received a supply of descriptive folders and a poster for display in their reception rooms during October.

National distribution has been given to the 1950 report of the Pre-payment Medical Care Committee of the Nebraska State Medical Association. The Blue Shield Commission included a copy of the report in a folio of educational material which it assembled and distributed to all Blue Shield Plans in the nation. Nebraska physicians received a copy of the report, headed "Unanimously Accepted," with a covering memorandum, two months ago.

Every physician attending the Mid-West Clinical Society Annual Assembly at Hotel Paxton, Omaha, on October 27 to November 2, is cordially invited to visit the Blue Cross-Blue Shield exhibit booth. Information, supplies and souvenirs will be available.

"The physicians of America, practicing as individuals, have to their credit outstanding achievements in the health field. There is every reason to believe that through Blue Shield their collective efforts will add fresh laurels to a long record of brilliant service to the public."

JOHN F. McCORMACK, Vice President,
United Medical Service, Inc., New York.

REMINDER: Many of your patients who are not ordinarily eligible for Blue Cross-Blue Shield membership may apply for this protection during October. The special Non-Group enrollment campaign being conducted this month gives anyone under age 65 an opportunity to join, regardless of employment status.

BOOK RECEIVED

The Changing Years; What To Do About Menopause by Madeline Gray. Doubleday and Company, Publishers. Price, $2.75.

NEBRASKA MEDICAL SERVICE

BALANCE SHEET

July 31, 1951

Assets:		
Cash in Banks	$200,543.60	
Premiums in Process of Collection	18,508.45	
U.S. Bonds	409,950.50	
Accrued Interest on U.S. Bonds	3,056.05	
Total Assets		$632,058.60
Liabilities, Reserves and Surplus:		
Accounts Payable, Blue Cross	$ 12,946.83	
Accounts Payable, Monthly Invoices	488.75	
Accrued Payroll Taxes	76.30	
Claims Reported but Unpaid (Pending)	7,230.00	
Unearned Premiums	115,458.27	
Total Liabilities		$136,200.15
Reserves for:		
Unreported Claims	$131,754.21	
Maternity Care	179,249.94	
Bonuses	1,850.00	
Collection Losses	1,500.00	
Premium Tax Liability	4,171.41	
Total Reserves		$318,525.56
Unassigned Surplus:		$177,332.89
Total Liabilities, Reserves, Surplus		$632,058.60

STATEMENT OF INCOME AND EXPENSE

July, 1951

	July	7 Months to Date
Income:		
Dues	$155,439.69	$1,052,978.74
Enrollment Fees	1,209.00	10,409.00
Total Earned Income	$156,648.69	$1,063,387.74
Claim Expense:		
Claims Paid	$124,669.25	$ 864,381.00
Less: Unreported. 6-30-51	128,133.50	128,517.12
Pending. 6-30-51	10.237.00	1,944.00
Plus: Unreported, 7-31-51	131,754.21	131,754.21
Pending, 7-31-51	7,230.00	7,230.00
Total Claims Incurred	$125,282.96	$ 872,904.09
Administrative Expense:		
Collection Expense	$ 6.50	$ 226.03
Professional - Medical	250.00	1,750.00
Auditing Expense	--------	840.00
Advertising—B.S. Only	--------	449.23
Printing	413.36	5,323.80
Office Supplies	--------	23.25
Postage	--------	134.00
Dues	157.97	1,087.29
Taxes and Licenses	651.29	5,325.77
Payroll Taxes	6.25	43.75
Payment to B.C.—		
Regular	12,642.79	85,131.67
Advertising	304.04	5,074.47
Bonus Expense	300.00	2,100.00
Conference and Meetings	247.68	2,616.16
Salary. Secretary	416.67	2,916.67
Miscellaneous	.50	81.22
Total Administrative Expense	$ 15,397.05	$ 113,123.31
Gain or Loss from Underwriting	$ 15,968.68	$ 77,360.34
Miscellaneous Gain or Loss Items:		
Plus—Miscellaneous Income	--------	$ 460.25
Interest on U.S. Bonds	531.25	1,343.77
Increase or Decrease in Maternity Reserve	—237.06	25,158.24
Net Transfer to Surplus	$ 16,736.99	$ 54,006.12
Surplus—6-30-51 and 12-31-50	$160,595.90	$ 123,326.77
Surplus—7-31-51	$177,32.89	$ 177,332.89

CASE REPORT, JULY, 1951

Number of Services Rendered	4,068
Females	2,365
Males	1,703
Subscribers	1,470
Dependents	2,598

MEMBERSHIP SUMMARY, JULY, 1951

Groups enrolled during July	35
Groups cancelled during July	31
Number of active groups, August 1, 1951	3,117

	Subscribers	Dependents	Participants
Membership, July 1, 1951	66,318	92,182	158,500
Additions	1,331		
Less Terminations	1,087		
Plus Reinstatements	50		
Net Gain	294		
Membership, August 1, 1951	66,612	92,591	159,203

Deaths

George H. Morris, M.D., Oshkosh. Born in Iowa in 1866. Graduated from College of Physicians and Surgeons at Keokuk, Iowa in 1907. Practiced in Oklahoma for a short time when he moved to Nebraska. He located in Oshkosh in 1911 and remained there until the time of his death August 17, 1951. Surviving are his wife and three daughters and one son.

Joel C. Hickman, M.D., Geneva. Born in Seward, Nebraska in 1887. Graduated from Lincoln Medical College in 1908. Following graduation he went East where he took post-graduate work, returning to Nebraska to settle in Strang. After eleven years he moved to Geneva where he remained in practice until the time of his death August 11, 1951. Dr. Hickman was active in the American Legion and the Masonic Lodge and was a staunch believer in the principles of organized medicine. He served as president of the Fillmore-Saline Medical Association and on several occasions was a delegate to the Nebraska State Medical Association. He served as a medical officer in World War I. Surviving are his wife and a son.

Joe Morrow, M.D., Seward. Born in Cass County in 1870. Graduated from Electric Medical College in Cincinnati in 1892. Practiced in Garland from 1892 to 1902, when he moved to Seward to establish the Morrow Hospital. At one time he was Professor of Anatomy and Surgery in Lincoln Medical College.

Dr. Morrow was also interested in civic and political life of the area having served on the town board, the school board, the Chamber of Commerce and on one occasion he was elected to the Nebraska legislature. Died August 11, 1951. Surviving are his wife, a sister and two brothers, one of whom is Dr. Bert Morrow of Seward, and another Dr. Milt Morrow of Muskoggee, Oklahoma.

BOOK RECEIVED

Spatial Vector Electrocardiography, Clinical Electrocardiographic Interpretation. By Robert P. Grant, M.D., National Heart Institute, Bethesda, Md., and E. Harvey Estes, Jr., M.D., U.S. Naval Hospital, Bethesda, Mo. 41 figures, 149 pages, June 1, 1951, $4.50. The Blakiston Company, Philadelphia 5.

The problem of reading and interpreting electrocardiographs is simplified for practitioners and students in this text by the use of vector methods. It is written in simple and non-technical terms for daily use by those who have had no special training in physics or mathematics.

It contains only those theoretical aspects absolutely indispensable for a clear understanding of the clinical application of EGG.

The use of vector methods gives simple, accurate and objective interpretations of normalities and abnormalities. When combined with the "pattern" and empirical methods, it makes the interpretation objective rather than intuitive.

The material included covers the ventricular EGG —a discussion of the QRS and T abnormalities.

Human Interest Tales

Communications bearing human appeal are solicited. They should be addressed to The Editor, Nebraska State Medical Journal, 111 So. 39th, Omaha.

Dr. R. J. McIntire has become associated with Dr. R. C. Anderson of Columbus.

Dr. Robert J. Twinem, formerly of North Platte, has moved to Garden City, Kansas.

Dr. John Keown is the new associate of Drs. C. A. Pierson and C. A. Buhl in Pender.

Dr. Gilbert C. Schreiner, formerly of Unadilla, has joined the Nebraska City Medical Group.

Dr. C. L. Tunberg of Seward has been promoted to captain and will soon leave for Japan.

Dr. M. A. Johnson, Plainview, is the new president of the Elkhorn Valley Medical Society.

Dr. August C. Gauchat of Auburn has taken over the practice of Dr. C. R. Weber in Hastings.

The new associate with Dr. A. J. Schwedhelm of Norfolk is Dr. Francis A. Bulawa of Omaha.

Dr. O. A. Kostal of Hastings has a new associate, Dr. Adrian A. Foe, formerly of Red Cloud.

Dr. Lincoln Riley, who has practiced in Wisner for 63 years, celebrated his 84th birthday in August.

Leaving Crawford for a position with the Veterans hospital at Miles City, Montana, is Dr. R. L. Ivins.

Dr. Paul L. Barnes, formerly of Norfolk, was recently killed in an automobile accident in Phoenix, Arizona.

Dr. F. T. Wright, formerly of Lincoln, is on the staff at the Arizona State Hospital at Phoenix, Arizona.

Dr. A. J. Lombardo has announced the opening of his office, in Omaha, practice limited to infants and children.

Dr. and Mrs. Charles W. Harms of Lincoln, celebrated their twenty-fifth wedding anniversary early in September.

Denison will have two new doctors. They are Drs. H. J. Billerbeck and M. W. Broers, both natives of Nebraska.

Dr. E. J. Loeffel of Gering has been called to active duty with the U.S. army. Dr. Loeffel holds the rank of a captain.

It is reported that Dr. W. L. Miller will resume practice in Sterling. He has been living in Oklahoma for the past year.

The appointment of Dr. Charles W. Landgraf, Jr. of Norfolk to the staff of Hastings state hospital has been announced.

Honored by the residents of Beaver City for his services to the community was Dr. C. C. Copeland, who has practiced there for 47 years.

Dr. Dick Steenburg of Aurora has enlisted in the army and has been commissioned a first lieutenant. Dr. Steenburg has had an assistant residency at Peter Bent Brigham hospital in Boston.

The Complaint of the Patient

(Continued from page 333)

cide whether complaints are part of the clinical syndrome which is being considered or whether they are an over-lay of functional symptoms, that is, symptoms motivated by some psychological process. In reviewing our material from the gynecological service, it was noted that a considerable number of dilatation and curettages were done, always with a justifiable reason, but the operative procedure did not seem to be related to the majority of the patients' complaints. It is further interesting to note that 3 patients who had been considered complaintive and who had had diagnostic dilatation and curettage, were free of complaints following this procedure. The expression of symptoms unrelated to the main clinical problem is not confined to the gynecological service but is seen in all branches of medical practice. It is also interesting to note the high percentage of patients of the complaintive group who reported benefit from surgery.

In this report the complaint is dealt with as a body protest which is symbolized verbally. It is very difficult from the study of the complaint itself to determine how much emotional feeling is associated with the verbal symbol. In addition to the verbal elaboration of the symptom, something should be said in terms of the language of the body. By this we mean that frequently there are informative postures, gestures — something the patient does — that gives a new insight into such emotional factors as tension, anxiety, anger, depression, or some other affective component which could be important in evaluation of the patient's complaint. It is our assumption that any illness is an "experiment of nature" which offers as a safety valve or body protest certain facts, as complaints. These complaints must be studied as indicating some break in the integrated functioning of the individual.

We believe that the presenting complaints are often transcribed in the physician's past experience. Occasionally a need to place a patient in a diagnostic strait-jacket will result in the renunciation of other complaints. Thus, pain in the right lower quadrant may become pain in McBurney's point, which is, of course, the physician's own translation of the patient's complaint. This translation is probably due to the great emphasis which is placed on nosology in medicine. The emphasis is placed upon making a diagnosis rather than upon understanding the complaints. This may be illustrated by a case of backache without segmental sensory loss, which may be rejected as uninteresting because the complaints are not definite and clear-cut. Such a case presents a challenge which is not always accepted. We ask if the routine history-taking has not become stereotyped and fitted particularly for physicians who wear blinders. History-taking should be the elaboration and study of the complaint with emphasis upon what actually is present in the complaint.

It is planned to continue this study to see if a more genetic, dynamic approach to clinical problems cannot be made. It is our plan to avoid the nosological orientation of the present-day more routine method of history-taking, and to examine the complaints of a larger number of cases. We hope that, as a result of our study of the complaint, some evaluation of its importance will emerge and will provide a foundation for the development of a more dynamic understanding both of the patient and his illness.

CONCLUSIONS

1. A total of 254 consecutive admissions to the University Hospital, (1) 170 surgical and (2) 84 medical cases, were interviewed to elicit spontaneous complaints.
2. Complaints were listed as to quality and a comparison was made of the surgical and medical groups.
3. A follow-up study was made to determine which cases are now clear or limited and which are still complaintive. It was noted that the greater proportion of those who were complaintive continued to be complaintive after discharge from the hospital regardless of the therapy employed.
4. The role of the complaint in the study of a patient is discussed.

Over 18,900 radioactive isotopes have been shipped by AEC since program started in 1946. Among the medical uses and advances: 100 thyroid cancer cases treated with good response in 15 per cent of cases; radiactive iodine aided 95 per cent of 1,000 hyperthyroidism cases tested; new diagnosis of certain brain tumors developed, also better method for treating polycythemia vera . . . Public Health Reports (Vol. 66, No. 30) deals with use of a membrane filter in sanitary bacteriology. Filter reduces the number of operations needed for bacterial analysis, calls for less time, space and equipment . . . Birth rate for first five months of this year, if maintained, will surpass record year, 1947; through May rate was 23.9 per 1,000 population or 7.2 per cent above the same period in 1950.—(Capitol Clinic).

The Nebraska State Medical Journal

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

Vol. 36 Norfolk, Nebraska, November, 1951 No. 11

EDITORIAL

MORE BLOOD IS URGENTLY NEEDED

On another page in this issue is a plea by the Regional center and the Omaha-Douglas County Medical Society for a concerted effort on the part of the physicians in this state to secure blood donors. The need for blood is greater than it has ever been in the past, for reasons that are too obvious to require lengthy discussion. Human blood and/or its by-products has become recognized as one of the most potent agents in therapeutics, and the demands for its use is constantly increasing. Transfusions of whole blood or of plasma have saved millions of lives on the battle fields. In civilian life the results are no less spectacular. The poor surgical risks of former years, the athreptic infant, the erythroblastotic newborn, the patient in shock, the severely burned or injured, to mention only a few instances, who in the past were considered hopeless, now can survive through the administration of blood.

The public is fully aware of the benefits of tranfusion. However this awareness is to a large extent passive. To activate it requires a sustained program of mass education not only on its value to the sick and injured, but as well on the harmlessness of venesection to healthy person. The American Red Cross through its County chapters is doing all it can to secure donations of blood. The degree of its success however, will be determined by the diligent cooperation of the individual physician in the community. The task is simple, unless the doctor erroneously assumes the role of apologist. The ready availability of blood is one of best assets to the health of any community regardless of size. No physician needs, or indeed can afford to be reluctant in trying to convince the people of its importance.

Where blood can be processed locally it is perfectly proper, if a patient needs a transfusion, for the physician to request that one or more relatives and/or friends of that patient donate a pint of blood, in an effort to replace the blood used and to enhance the volume in the bank. It is likewise proper and most important that in the event of the arrival of the bloodmobile in a community dependent on the regional bank, for the local physician to see that as many of the healthy residents present themselves with their donations of blood as it is possible for him or his secretary to round up. Most people like to give blood. Many of them however, need a little encouragement to do it.

Who, better than the family physician can supply this encouragement?

THE OUTLOOK FOR THE DIABETIC: AN OPTIMISTIC NOTE

About five years ago the medical world was cast into gloom by a report of Henry Dolger that the diabetic inevitably faced the prospect of vascular degeneration with its hazardous concomitants of retinal, renal, and cardiac involvements, and peripheral gangrene. Such outcome seemingly was only a matter of time, and had nothing whatever to do with the degree of diabetic control, good or bad. According to these studies every juvenile diabetic of 20 years duration had developed retinal or renal pathology. Of necessity such views were followed by a wave of skepticism regarding the efficacy of strict control of the diabetic, and of the wisdom of the psychologic proscriptions necessitated thereby.

This attitude of pessimism and defeatism was by no means shared by all authorities in the field of diabetes. On the contrary most of these argued there was no unanimity of

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opinion as to what constitutes "good control;" that few patients received sufficient medical supervision to be assured of such control; and that, moreover, if there was to be any hope for the long term diabetic, what else could be done but insist on such control. The latter argument, admittedly negative, nevertheless opens a door for further studies in the hope of uncovering newer evidence to reverse the pessimistic attitude. Such evidence came forth in the past few months in the form of three notable contributions. One of these studies, by Daeschner, Deisher, and Hartman (J. Pediat., Jan. 1951) covers 60 cases of from 7 to 28 years duration with onset of diabetes prior to age 15. Another by Wilson, Root, and Marble (Am. J. Med. Sci., May 1951), reports on 247 cases with onset prior to age 30. And the third by E. P. Joslin (J.A.M.A., Sept. 15, 1951), analyzes 760 cases with onset before age 40. These contributions are of particular importance because the degree of control is carefully quantitated in each case. There is unanimous agreement in the conclusions arrived at; namely, that the duration is definitely a factor in the degenerative phenomena, but that the degree of control has a great bearing on the modification of such degenerations. One has but to read these articles to be convinced that the better the control, the more favorable the outlook for the patient.

Of special interest is Dr. Joslin's description of the 23 winners of the 25-year Victory Medals. These medals are awarded to those diabetics who have had their diabetes for 25 years or longer without developing degenerative manifestations of any kind as evidenced by every available method of examination. The care used in the selection of these winners is indicated by the remark of Dr. Joslin that a near medal winner, age 63 was denied the award because of the finding of a single hemorrhage in one retina. The medal winners range in age from 27 to 61, their diabetes onset at age of 22 months to 32 years, with a duration up to 34 years. (Onset in 1916, 5 years before insulin). Most of these winners are taking a daily insulin dose in excess of 50 units, and some as high as 100 units. The common denominator in all of these cases was "good control." Since the presentation of these figures six more medals have been awarded.

If good diabetic control can bring about such results, how much more can be accomplished by early discovery combined with thorough and consistent treatment? For that we have no figures as yet. The Diabetes Detection Drive is still too young a movement. But we are entitled to conjectures, and these cannot help but be favorable. Last year about one-fourth of the membership of our State Medical Association reported the screening of 8,619 persons during Diabetes Week, with 92 positive results. This is not a bad record for a "beginning," but when we realize that there are an estimated 9,000 "unknown" diabetics in the state of Nebraska we begin to appreciate the size of the job that we still have to do. Such a job cannot be done in one week. The Diabetes Week is meant only to initiate the drive which must be continued throughout the entire year.

M. MARGOLIN. M.D., Chairman,
Committee on Diabetes,
Nebraska State Medical Assn.

REFRESHER COURSE IN PEDIATRICS AND OBSTETRICS

University of Nebraska College of Medicine

With the Cooperation of the MCH Division of the Nebraska State Department of Health

Pediatrics: Nov. 23-24, 1951

Obstetrics: Dec. 7-8, 1951

The courses are designed to meet the practical needs of the physician in daily practice. The speaker in Pediatrics will be E. B. Platner, M.D., Associate Clinical Professor in Pediatrics, University of Colorado School of Medicine. The speaker in Obstetrics will be Dr. William C. Keetel, Associate Professor of Obstetrics and Gynecology, University of Iowa School of Medicine. Registration in each course will be limited to ten members. There will be a registration fee of ten dollars payable at the time of registration.

For further information, write to Dean H. C. Lueth, University of Nebraska College of Medicine.

CALL FOR PAPERS

Anyone wishing to read a paper at the Annual Session May 12, 13, 14 and 15, 1952, should get your name and title to R. B. Adams, M.D., 1315 Sharp Building, Lincoln 8, Nebraska. No requests will be accepted after February 1, 1952.

ORIGINAL ARTICLES

Lung Tumors as the Pathologist Sees Them*

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INTRODUCTION

Recent progress in medicine has included a significant alteration in the pathologist's attitude toward tumors of the lung. The academic contemplation of the autopsy lung has been replaced by the present dynamic concept of the living disease. Several factors precipitated this change.

In the first place there is thought, by many, to be an absolute increase in the number of primary carcinomas of the lung. The majority of observers feel that this increase has occurred during the past 30 years and that lung cancers are increasing at a higher rate than are cancers of such other organs as the stomach and intestine. Others believe that the increase is more apparent than real and that it is due to improved case finding and recognition and to the concentration of such cases in medical centers. Whether the increase is actual or only apparent, it is a fact that the pathologist now sees many more lung cancers than 20 years ago.

A second item of significance is the increasing degree to which lung tumors are being recognized through the use of survey X-rays of the chest. The remarkable incidence of lung tumors, particularly asymptomatic ones, in survey films has provided data regarding early stages of tumors and growth characteristics which have been invaluable.

The third and most important explanation of the pathologist's changing concept of lung tumors is the great development of thoracic surgery during the past two decades. Prior to 1933 lung cancers were seen only as autopsy specimens. However, thoracic surgery has developed to such a degree that a lung tumor is no longer a curiosity in the laboratory; it is as routine a specimen as cancer of the stomach or of the intestines.

Thus, the pathologist has come to think of lung tumors more and more from the point of view of surgical pathology rather than autopsy pathology. This has caused a considerable change in the pathological study of lung tumors with emphasis on such things as location, classification, growth patterns, rate of growth, grading, and various other aspects which form a basis for evalulation of prognosis and treatment. Such an approach was obviously of little importance until lungs could be removed surgically. Pathological evaluation of lung tumors now assumes a dynamic clinical importance rather than being merely of autopsy and statistical significance.

Lung tumors will be discussed here chiefly as the surgical pathologist sees them, rather than as a complete review of the entire problem. Aspects which are of considerable interest to the surgical pathologist will be considered.

BRONCHOGENIC CARCINOMA

The most important lung tumor is bronchogenic carcinoma. It is the most common primary lung tumor and is also the most deadly. Analyses of surgical cases show statistics similar to those obtained from autopsies. Lung cancer is several times more common in the male than in the female. It occurs in the cancer age, 40 to 60 years, and is slightly more common on the right side than the left. Several points are worth emphasizing, especially as they apply to surgical pathology. The majority of lung tumors are in large bronchi near the hilum. Because of this location, the bronchial lumen soon becomes partially or completely obstructed. Segmental emphysema, bronchitis, abscess and atelectasis are possible results of the mechanical distortion. This may take place even though the tumor is quite small. It is the atelectasis and abscess formation that give early symptoms and X-ray changes and allow an early diagnosis. However, any diagnostic advantage due to location is offset by the anatomic proximity of vital mediastinal structures to which the cancer extends either directly or through lymphatics. This one factor, coupled with the knowledge that the majority of lung carcinomas are of high-grade malignancy, is the cause for our pessimistic attitude regarding the cure of bronchogenic carcinoma by surgery alone. By the time the tumors are recognized, far too many are already beyond the scope of reasonable resection. One conclusion from the study of surgical pathological specimens is that the surgical excision is not, nor is it potentially, the ideal form of treatment for bronchogenic carcinoma. The fact remains, however, that surgery is the only curative treatment available and should be developed to the greatest extent until some better means of therapy may be discovered in the future.

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*Read before Annual Convention Nebraska State Medical Association, May, 1951.

Two diagnostic measures have been developed to assist in the diagnosis of lung cancer: examination of bronchoscopic biopsy and study of smears of sputum or bronchial espiration. The frequent location of cancer in the large bronchi allows a bronchoscopic biopsy in 34% of the cases. From the biopsy the pathologist can usually give not only a diagnosis of tumor, but also its classification and grade. Examination of sputum or of bronchial aspiration by the Papanicolaou is a newer diagnostic procedure which gives positive results in 61% of the cases. As experience in this method increases, a higher incidence of positive diagnoses can be expected. The number of false positive results is already low (1.4%).

BRONCHIAL ADENOMA

Of particular interest to the surgical pathologist is the bronchial adenoma. This neoplasm statistically represents only 4% of all lung tumors, but since it is practically always resectable, it makes up 15% of surgical lung tumor specimens.

The pathologic views regarding bronchial adenomas provide an excellent example of the way in which pathologic concepts have been altered, since surgical pathology provides a stimulus for evaluation which is not provided by autopsy material. The evolution of knowledge of the pathology of bronchial adenomas has gone through three phases: (1) Prior to the time of lung resection for tumors and during the first few years of the resection era, bronchial adenomas were classified with bronchogenic carcinomas. (2) With the development of lung surgery it became apparent that these tumors, clinically, grossly and microscopically, were much less malignant than bronchogenic carcinomas, and in this second phase they were considered to be benign neoplasms — as the term adenoma implies. (3) More recently there has evolved a third concept which may be summarized as follows: bronchial adenomas are different tumors from bronchogenic carcinomas; they are distinct clinical, gross and microscopic entities; they are tumors which are locally destructive, locally invasive and potentially capable of metastasizing either to regional lymph nodes or to distant organs. They occur at any age, but at a somewhat younger age than the average for bronchogenic carcinomas. We have seen three cases in patients under 20 years of age; the youngest, a patient of 13 years. In contrast to bronchogenic carcinoma, which is 8 times as common in males, the sex incidence of bronchial adenomas is about equal. The tumors arise predominantly in the main and lobar bronchi. They are grossly circumscribed, fleshy neoplasms without necrosis and may extend either into the lumen or grow as bulky masses, chiefly extrinsic to the bronchial wall. Microscopically they appear as slowly growing, circumscribed tumors, usually with a strong resemblance in pattern to carcinoid tumors of the intestinal tract. They are often vascular and it is the vascularity, plus the ulcerative necrosis of the overlying mucosa that result in the common symptom, hemoptysis. Metastases occur in about 10% of the cases and are usually to local lymph nodes; however, distant metastases through the blood stream are occasionally seen. Pathologically these are slowly growing tumors of only slight or potential malignancy, and consequently it is not surprising that most cases are both resectable and curable.

Bronchial adenomas probably arise from mucous glands in the bronchial wall and are analogous to basal cell carcinomas of the skin or to mixed tumors of the salivary gland in that they locally invade, but only occasionally metastasize. They must, however, be considered as low-grade cancers, but in a different category from the more common bronchogenic carcinomas.

OTHER TUMORS

There are various other tumors which may be found in the lung. Some, like the hemangioma, are important because of the high curability rate with resection; others, such as the pleural mesothelioma, typify a crystallization of opinion regarding classification. Only a few of these need be singled out for particular mention here. One is the hamartoma, an asymptomatic tumor found occasionally in survey X-ray films. Hamartomas are overgrowths of various tissue elements, all of which are normally present in the structure in which they arise. Hamartomas of the lung, pathologically, are circumscribed, benign overgrowths of various elements of the lung intermixed to include bronchial epithelium, bronchial glands, cartilage, etc. Since the cartilaginous portion is often the predominant element, these tumors have been diagnosed as chondromas or chondrosarcomas. It is impossible to make a definite diagnosis prior to the operative excision.

Another significant lesion pathologically is pulmonary adenomatosis. This is a condition in which many portions of one or both lungs show a peculiar overgrowth of epitelium extending along the alveolar walls in an adenomatoid arrangement. It is sometimes called alveolar carcinoma, an erroneous term since it is not known whether all cases represent neoplasms or whether some of them are merely peculiar inflammatory responses, perhaps to a viral infection. Probably some belong in each group.

The lung is a common site for metastases, especially hematogenous, from various parts of the body. If the metastasis is solitary, it may be excised as a therapeutic or diagnostic measure. It is often difficult to determine pathologically whether such a tumor is primary in the lung or metastatic. Primary lung cancers may be glandular, squamous or undifferentiated and thus may simulate tumors arising in many different organs. Of some value to the surgical pathologist is the condition of the mediastinal nodes, since it is rare for a secondary tumor in the lung to re-metastasize to these.

MEDIASTINAL TUMORS

It is impossible to consider tumors of the lung without a consideration of tumors of the mediastinum. The medisatinum is divided into three portions. The anterior mediastinum contains fat and the thymus; the middle mediastinum contains the heart and its great vessels and the bifurcation of the trachea with the adjacent lymph nodes. In the posterior mediastinum lie the esophagus, thoracic duct, nerves and aorta. Any structure normally present in the mediastinum is capable potentially of giving rise to a tumor. In addition, embryonic rests persisting in any portion of the mediastinum may become tumors.

The structures, in summary, are representative of the respiratory, circulatory, gastro-intestinal, lymphoid and nervous systems. Most of the tumors fall into one of three large groups, lymphoid neurogenic or cystic.

Lymphoid tumors make up about 15% of the total surgical specimens. This is not the true comparative incidence, since many lymphoid tumors are neither excised nor biopsied, but are treated directly with X-ray on the basis of clinical diagnosis. The commonest location is in the middle mediastinum where they arise from the lymph nodes about the trachea and its bifurcation. The tumors are pathologically similar both in gross and microscopic types to lymphoid tumors occuring elsewhere in the body.

Neurogenic tumors make up about 40% of the total. They characteristically arise in the posterior portion of the mediastinum and the typical tumor of the group is the neurilemmoma arising from the nerve sheath. About one-fourth of the neurogenic tumors are malignant.

Cystic tumors of the mediastinum make up the third group and may be teratomas or dermoids, may represent a reduplication of either bronchus or gastro-intestinal tract, or may arise from the pericardium.

From the pathologist's standpoint any mediastinal tumor should be excised unless it is of lymphoid origin. This is not only because the incidence of malignant change of tumors of the mediastinum is significant, but also because the continued growth of these tumors causes interference with functions of adjacent vital structures.

INFECTION SIMULATING TUMOR

It is not surprising that at times there are lesions removed as lung tumors which are found pathologically to be non-neoplastic. This also lies within the scope of the surgical pathology of lung tumors. Abscess, unresolved pneumonia and encapsulated empyema are examples of conditions which simulate tumors clinically, roentgenologically and grossly. One of the most difficult lesions to diagnose prior to surgery is the tuberculoma. A tuberculoma is a localized, circumscribed, non-cavitary focus of tuberculosis. It has no patent bronchial communiaction and therefore does not give rise to a positive sputum. It may persist for a considerable time without change of size, or it may enlarge and ultimately rupture into a bronchus. While tuberculoma is a poor pathologic term, it is clinically a reasonable one since these lesions strongly resemble tumors in radiologic and gross appearance.

SUMMARY

In summary, several recent advances in medicine, such as the development of thoracic surgery, have caused the pathologist to revise his approach to the study of lung tumors. This change in the pathologist's concept to a more dynamic evaluation of tumors of the lung has already brought benefits to patients and is in keeping with the general widening of medical horizons.

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The Use and Abuse of Bronchography in Lung Disease*

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Boston, Mass.

The use of contrast media for the delineation of the bronchial tree is an important step in the diagnosis of certain pulmonary diseases. It is the only possible means of visualizing the peripheral portion of the bronchial tree, going far beyond the region visualized by the bronchoscope. Therein lies its chief value. Bronchography might well be likened to a road map. It is in reality a map of the bronchial tree and allows the thoracic surgeon to map out his course before he opens the chest.

Many of you are constantly being called upon to treat patients with chest complaints. Some will respond readily to treatment. Others may respond rapidly only to recur quickly and repeatedly. These are the people in whom bronchography plays an important role in diagnosis. A chronic cough with or without sputum requires that bronchograms be made. Frequent and repeated colds or bouts of pneumonia require bronchography and may reveal bronchiectasis as the underlying cause. Shortness of breath in the absence of cardiac disease may be of pulmonary origin and requires complete studies including bronchography. Patients who wheeze may be known to have severe asthma, but the cause of the asthma is often difficult to locate. Bronchography may reveal bronchiectasis as the etiologic agent. Resection of the diseased segments can cure this type of patient. You may be consulted by a patient who has spit up some blood. This may be only flecks in the sputum or it may be a massive hemorrhage. In the absence of tumor or tuberculosis, this patient needs bronchography. He may have advanced bronchietasis in the absence of other pulmonary symptoms. Another patient may have disabling symptoms of the type listed above and yet have a perfectly normal chest by plain x-ray. Others will show only crowding of the basal markings. These findings do not rule out important pulmonary pathology. Only bronchography can give the final answer.

Bronchography is a safe diagnostic procedure. The time honored contrast media are iodized oils which we still prefer because of their ease of use and greater degree of contrast. Much interest is being shown in the newer water solube iodine-containing compounds. We have had the opportunity to use one such preparation—namely iodouran B—on several occasions. Its chief advantage lies in its rapid absorption from the lungs. Within one hour, the lungs are completely free of opaquemedia, and surgery can be performed immediately if so indicated. The water soluble iodides are absorbed from the bronchi and excreted by the kidneys. One can get an excellent excretory urogram one-half hour after bronchography. The disadvantages which we found were first—lack of density—The density simulates that of an excretory urogram; whereas lipiodol has a metallic density— Secondly: We have been unable to adequately visualize the peripheral portions of the bronchi due to the marked viscosity of the preparation.

Many people are allergic to iodides, but iodized oils are not absorbed from the bronchi or alveoli in appreciable quantities. Iodism may occur if the patient coughs and ingests oil during the examination as the iodine is absorbed from the gastro-intestinal mucosa. We do not yet know about allergy to the water soluble iodides, but one would expect them to be similar to the contrast media used in excretory urography and thus sensitivity tests will be required.

I would like to present to you an exceedingly simple yet satisfactory technique for bronchography. One must know the anatomic segments to secure satisfactory bronchograms, and so it is perhaps permissable to disgress for a moment to point them out.

The lungs are divided into lobes which are further subdivided into well defined segments. We believe the classification suggested by Jackson & Hueber⁽¹⁾ to be the most satisfactory as common meeting ground for internist, surgeon and radiologist. Each of the five lobes of the lung is divided into well defined, functioning segments. The number varies in each lobe. The right upper lobe has three segments; namely the anterior, posterior and apical. The right middle lobe has only two segments—medial and lateral while the lower lobe on the right has five divisions —namely the superior, anterior, lateral, posterior and medial basal segments. The left upper lobe has three segments. The apicoposterior is comparable to the apical and posterior bronchi on the contralateral side. It is so named because it arises from a single trunk. The anterior segment and the lingu-

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*Read before Annual Convention Nebraska State Medical Association, May, 1951.

la constitute the remainder of the left upper lobe. The lingula which corresponds to the middle lobe on the right is further divided into two subsegments—the superior and inferior. The left lower lobe differs from its mate on the right in that it lacks a medial branch.

In performing bronchography, the prime factor is adequate pre-medication which is sufficient to allay apprehension and depress the cough reflex yet leave the patient alert and co-operative. Bronchoscopy is helpful in that secretions can be aspirated, but it is not essential. We have found that chilling the lipiodol will prevent rapid alveolarization which obscures the bronchial tree. Also, the injection of small amounts at a time to avoid flooding any one segment will aid in securing better bronchograms. The patient is placed supine on a tilting flouroscopic table, the head of which is raised 10-15° and the patient rotated 30° toward the right. 3-4 c.c. of lipiodol are injected. This position has a two-fold purpose. First it prevents the opaque media from entering the contralateral lung, and secondly it avoids flooding of the superior segment of the lower lobe. As soon as the superior segment and the posterior basal bronchi begin to fill, the patient is rotated to a true lateral position. The upper lobe bronchi and the lateral basal bronchi will fill this position. The patient is placed prone on the table and a final bolus of 3-4 c.c. is injected. The remaining segments will fill in this position. The patient is returned to the lateral position, and a check is made to see that all segments are visualized. The basal bronchi will not be filled to their terminal branches; but as the patient stands for PA and lateral films, gravity will satisfactorily coat them.

The patient is returned to the fluoroscopic table, and the catheter is introduced into the left main stem bronchus. A useful trick for getting the catheter into the desired bronchus is to turn the head to the opposite side. This, in effect, makes a straight line of the trachea and main stem bronchus.

The bronchi of the left lung are easier to fill than the right. The patient must be kept in the prone position until it is certain that both segments of the lingula are visualized. This appears to parallel the left heart border and has a marked pulsation which will distinguish it from any other segment. When all bronchi are visualized, the patient is again asked to stand and three films are taken. These are a PA and right and left obliques. The obliques are taken with only 20° rotation. With these five films, an excellent view of each segment is obtained.

Bronchiectasis as revealed by bronchography may present several different appearances. Bronchography may show merely crowding of the bronchi indicating a partially collapsed lobe. There will also be some loss of tubulation—the normal bronchus is smooth in outline and decreases uniformly in calibre to the periphery. Also, arborization along these bronchi will be absent. The above findings are commonly seen in patients with the so-called "middle lobe syndrome".

A second type of bronchiectasis will show a normal lung volume, but the bronchi are cylindrical and terminally blunted or club-shaped.

Far-advanced cases will show saccular dilation with some of the saccules measuring up to a centimeter in diameter.

Bronchographically, the so-called dry bronchiectasis produces a similar picture. (One difference is the absence of small radiolucent areas in the lipiodol column which are due to muccous plugs.)

We have also used bronchography in patients with severe intractable asthma. This despite the fact that many people claim it is contra-indicated. Fluoroscopically, we can see the effects of bronchial spasm.

Spasm is not present in all lobes nor in the same degree in a single lobe. Spasm manifests itself as abrupt narrowing at the orifice of a segment. The spasm is not necessarily constant. Momentary relaxation may allow a particular bronchus to partially fill. Spasm again recurs, and the lipiodol is rapidly ejected into the major bronchus. We have had several cases with intractable asthma in whom we have demonstrated localized bronchiectasis.

We do not use bronchography in cases of obvious tumor whether the diagnosis has been made by x-ray, bronchoscopy or sputum studies. It is our feeling that bronchography, although not contra-indicated, makes no contribution to the diagnosis. It delays definitive treatment in that surgery must be delayed until the opaque media is excreted. This may be a matter of weeks with our current media.

Bronchography has a limited place in the diagnosis of tuberculosis. Due to its slow removal from the lung it obscures the course of the underlying disease. The lipiodol may get into the alveoli where it can remain for months. In this location, it may imitate an area of tuberculous infiltration. However, there are occasions when the need of bronchography outweighs its disadvantages. If a patient is producing sputum in excess of that anticipated from his basic disease, bronchography may reveal bronchiectasis.

Bronchography to be of value in the diagnosis and treatment of a patient must be complete. It is important to show the surgeon which segments are normal as well as which are diseased.

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The Prevention and Treatment of Eclampsia

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Between the years 1941-1945, 70 maternal deaths occurred in Nebraska from eclampsia, an average of 11.1 per year(1). Although this figure was pared from 14 in 1944 to 7 in 1948 and 7 in 1949, convulsions and associated conditions still account for 25 per cent of maternal deaths in this state. In contrast, figures from large teaching centers with good facilities illustrate that eclampsia has diminished as a cause of death, accounting for as little as 7.4 per cent of all maternal deaths(2).

No figures are available regarding the incidence of eclampsia in Nebraska. But, if we assume that 13 per cent of eclamptic patients in this state die (a national average), 45 cases of convulsive toxemia may have occurred in 1949 out of 36,000 births, an incidence of 1 in 700. This figure compares with those teaching institutions to which patients with severe toxemia of pregnancy are usually referred who report an incidence of from 1-150 to 1-1250 (Table 1). Although hypertension, edema and proteinuria will occur in from 5 to 10 per cent of all obstetric patients regardless of the physicians' efforts, it is generally recognized that eclampsia (convulsions) can be avoided. The practicing physician might well ask what type of care is necessary for the prevention of this disease and what treatment in his hands is best for the most favorable results.

TABLE I

COLLECTED INCIDENCE OF ECLAMPSIA*

Source	Years	Total Deliveries	Total Eclampsia	Ratio
New Orleans	1931-1949	99833	650	1-150
New Jersey	1931-1950	121459	292	1-415
San Francisco	1932-1950	13916	20	1-700
Chicago	1941-1950	33698	27	1-1250
University of Nebraska	1931-1950	9079	27	1-330

*Author is indebted to Dr. Wm. J. Dieckmann, University of Chicago, Chicago, Illinois, Dr. Earnest Page, Berkely, California, Dr. James Ferguson, New Orleans, La., and Dr. Leon Chesley, Jersey City, New Jersey. for figures relative to the incidence of eclampsia.

In recent years, much has been written on what is termed "adequate care" but little has been said about its application on a practical scale. Too often authors assume that everyone is an obstetrical specialist with excellent hospital and laboratory facilities, forgetting the average doctor who still delivers the great majority of babies in the United States. Consequently, many important features of this subject seem out of reach for the practicing physician. This is unfortunate, for within the principles of intelligent prenatal care may lie the prevention of eclampsia as well as the prevention of many other serious complications in obstetric patients.

DIET

In 1946, Luikart(3) suggested that the prenatal patient eat a high protein, low carbohydrate and low fat diet. On this regime, less cases developed toxemia of pregnancy. Subsequently, national interest became aroused on this subject. Other studies confirmed the importance of diet in the prevention of toxemia of pregnancy. One clinic decided that the ideal diet should consist of about 85 grams of protein per day, limited to 1800 calories. Dietitians were employed to interpret these recommendations in respect to food stuffs and diets were handed out by physicians to patients. Unfortunately, many patients are only confused by such lists. Some conscientious patients may temporarily adhere to a diet, but certainly not permanently. If the nitrogen content of a 24-hour urine specimen is measured, it is possible to compute the protein intake each day. Studies by Macy et al(4), (1930) indicate that the positive nitrogen balance during pregnancy was 2.74 grams per day, and that the total protein intake in hospitalized parturients was an average of 83 grams daily. (Table 2) The same patient at home, however, may not eat protein so enthusiastically. According to one study(5), if patients are carefully instructed on a high protein diet, given a scale to weigh their food and even given meat free of charge, they often eat no more than 40-50 grams of protein each day in some instances. Our own nitrogen figures for 24-hour urine specimens also indicate that pregnant patients do not always eat the protein physicians advise. Our cases were selected at random from private patients of our staff; all were carefully advised on a high protein diet. Four of our studies were on doctor's wives, three on nurses, and one on a dietitian. The average protein intake of this group was 70.1 grams of protein per day. (Table 2) This figure was not materially different from the calculated protein intake of charity patients from our clinic who were not as carefully indoctrinated as to diet during pregnancy. It is apparently one thing, therefore, to instruct a patient on a diet and quite another to expect her to carry out those instructions. Perhaps the practicing physician might accomplish more if he instructed patients to eat a well balanced diet, to eat meat at least twice a day, to drink a quart of milk a day (or use a quart in cooking) and to eat plenty of green, leafy vegetables. It is possible that the expression "a well balanced diet" will serve to make the patient diet conscious and the expression "meat at least twice a day" will ring a responsive note in her mind as to the benefit of protein.

TABLE II
CALCULATED NITROGEN AS PROTEIN IN 24-HOUR URINE SPECIMENS

Private	Charity
51.9	54.35
44.5	91.35
65.1	60.28
81.6	59.3
73.3	58.5
75.9	77.3
58.7	56.7
83.9	73.4
75.8	99.2
89.4	
Average 70.1	Average 67.9

Figures represent total grams of protein intake the day specimen was obtained. This was calculated from the total protein nitrogen in the urine multiplied by 6.25 plus retained protein as obtained from figures published by Macy, et al (4). Note that average figures are practically the same, indicating that diet instructions as to protein intake in private patients are not necessarily observed.

TABLE III
SCRIMSHAW—INCIDENCE OF TOXEMIA

	Gold (High Income)		Silver (Low Income)	
	American	Pan-American	Pan-American	Negro
Preclampsia				
Mild	3.4%	2.8%	3.8%	6.2%
Severe	0.6%	1.2%	1.4%	1.9%
Eclampsia	0.1%	1.17%	0.71%	0.6%

TOTAL CASES STUDIED.........10,160

It is well known that economic and social factors are important in nutrition in toxemia of pregnancy. The undernourished, anemic, pregnant woman from a low economic group is a good candidate for toxemia. That the problem is more complex was illustrated in a study by Scrimshaw et al(6). (Table 3) It was noted by these investigators that Panamanians under employment in the Canal Zone are paid in either gold or silver, depending upon whether or not they work for the U. S. Government. Payments in gold placed one group in a much better economic strata than if payment were made in silver. However, the incidence of toxemia in the gold and silver groups was practically identical, higher than the rate in whites and less than in the silver paid West Indian negroes. This study would indicate that the relationship is more than purely economic; that it shows racial characteristics and that possibly the eating habits, education and actual preparation and care of food are very important etiologic factors. It is possible that the decrease during the fourth, fifth and sixth months in rate of toxemia of pregnancy noted over the last several years may be credited to improved home education rather than to better prenatal care. If so, the practicing physician can do more by sponsoring better home education in our schools on the preparation and care of food than by attempting to reeducate a housewife in his office as to diet.

WEIGHT

Reliable studies have shown that ideally the pregnant woman should gain from 18-20 pounds during pregnancy and that total weight gains over 25 pounds are associated with an increased incidence of toxemia of pregnancy. The old dictum of "eating enough for two" is fallacious since studies under conditions of starvation have shown that the fetus acts only as a parasite, remaining independent of the maternal nutrition. Furthermore, the sum of the weights of the infant, amniotic fluid, placenta and difference in weight between the pregnant and nonpregnant uterus rarely exceeds 15 pounds. Any weight gain, therefore, over this amount should be considered due to either adiposity or water retention. The normal weight gain is ordinarily confined to the last six months of pregnancy, five pounds and ten pounds during the last three months. Physicians should understand that it is very difficult to gain more than two pounds a week from calories alone; excesses over that amount are usually due to water retention.

From a practical viewpoint, the control of weight during pregnancy can be simplified. During the first three months, the weight gained is small. During the second three months excessive gains in weight are usually due to an increased caloric intake. The patient ordinarily feels like eating although it has been suggested that an excessive food intake is due to a basic unhappiness caused by changes in physical appearance. One study suggests that patients over-eat because they feel that they are rejected by their husbands and their friends. During this period, dexedrine taken twice a day; the second dose before 1:00 p.m. to prevent insomnia will, in many instances, reduce overeating and limit the amount of weight gained. Often doctors can accomplish much more with sympathy for an overeating obstetric patient than by brow-beating such cases and increasing their anxieties. During the last three months, any excessive gain (over two pounds per week) should be considered as water retention. During this period the enlarging uterus enroaches on the epigastrium and the patients have less room for food. Even in the absence of edema, such cases should be considered potential toxemics.

After twenty-eight weeks a patient with an excessive rate of weight gain should be cautioned about salt. She should not use salt in her cooking or use salt at table, and she should avoid eating salty foods. It is important not to keep patients on a salt poor diet over three weeks without supplementary vitamins. Patients should be cautioned against Bicarbonate of Soda for heartburn; aluminum hydroxide (Amphojel) is more effective and safer. Our clinic reports that Banthine in doses of 50 mg. twice a day has given good results for heartburn. In the frankly edematous patient, enteric coated ammonium chloride (7½ grain tablets) in doses of 120 grains per day for five days may eliminate many pounds of water if the salt intake is restricted. At our clinic(7), the newer "sodium removing resins*" have been used for removing excess water with good results. The patient who does not respond to these measures or who develops a hypertension over 140 systolic with proteinuria should be admitted to a hospital where the sodium intake can be better controlled, and edema more efficiently removed.

BLOOD PRESSURE

The blood pressure (systolic and diastolic) falls slightly during early pregnancy when compared with pre-pregnant controls. Late in gestation, however, there is a gradual increase in blood pressure until delivery. The diastolic pressure ordinarily does not exceed 90, and the systolic pressure should not exceed 140 mm. of mercury. It is my belief that more attention should be focused on the diastolic blood pressure since I have seen women with eclampsia with systolic pressures below 140 mm. but with diastolic pressures above 95. Any sudden increase of 20 mm. or more in diastolic pressure over 140 mm. systolic should be regarded with concern. Such cases should be interrogated carefully as to symptoms (Group B, Table IV), and the rate of weight gain should be checked as well as the presence of protein in the urine; and if there is any question in the physician's mind the patient should return in one week or less so that the rapid changes can be appreciated. Some doctors do not send all pregnant patients near the term hypertension to the hospital, but if they do so, such cases should be seen at frequent intervals.

TABLE IV
GROUPING OF SYMPTOMS

A. Hypertension	Edema	Proteinuria	
B. Visual	Gastrointestinal	Cerebral	Renal
Scotomata	Vomiting	Insomnia	Oliguria
Diplopia	Epigastric Pain	Headache	Anuria
Blurring	Jaundice	Dizziness	Hematuria
Decreased Vision	Hematemesis	Restlessness	
Amourosis		Amnesia	
		Drousiness	
		Hyperpyrexia	
		Tachycardia	
C. Eclampsia	Convulsions	Coma	

With experience the doctor will observe that some pregnant patients can tolerate a moderate hypertension with little difficulty while others experience severe symptoms (Group B, Table IV) with only a moderate elevation in blood pressure. Although no fast rule can be established for all cases of toxemia, in general the patient with previous hypertension tolerates a moderately elevated blood pressure best. The young primigravida with considerable water retention may commence having convulsions when the systolic pressure reaches 180 mm. of mercury. On the other hand, the older multipara with previous hypertension may remain asymptomatic with pressures of 180-190 mm. In general, blood pressure over 190 in any pregnant patient is serious since cerebral accidents may occur in such cases. The mortality is very high. Elevated blood pressures may be reduced by several means. Rest, barbiturates, magnesium sulfate intramuscularly, opiates, veratrone, spinal anesthesia and sympatholytic drugs have all been suggested. The more desirable drugs are sodium amytal in doses of 1½ to 3 grains, 50 per cent magnesium sulfate intramuscularly in doses of 6 to 12 cc. and veratrum derivatives by mouth. High spinal anesthesia may be used in selected cases. We do not recommend morphine.

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*Eli Lilly and Co., Indianapolis, Indiana.

LABORATORY TESTS

There is no laboratory test known which will always warn the physician if impending toxemia or for that matter, chemically identify the case as one of toxemia. All of the various tests which have been devised fail by their lack of specificity. To our knowledge the two best laboratory guides are urinary protein and blood hematocrit or hemoglobin.

In respect to the first of these the usual qualitative method for protein will suffice for the average patient. We favor the use of 3 per cent sulfosalicylic acid for the detection of proteinuria. By this method, the urine is added to 3-5 cc. of salicylate solution and the degree of cloudiness interpreted as a trace to four plus. A persistent proteinuria (over a heavy trace) is abnormal in any obstetric patient. In such cases, a twenty-four hour determination for protein is desirable. This can be done by advising the patient to measure urine passed within twenty-four hour. A small sample of this collection is brought to the doctor with a report of the volume. The volume is interpreted in cc. (1½ quarts=1,500 cc.) so that the laboratory report in grams per 100 cc. of urine can be adjusted for total volume of urine (15.00 x gm. protein per 100 cc.=gm. protein per 24 hours). In late pregnancy, a persistent proteinuria for over one week of from 1 to 3 grams per twenty-four hours should be considered deleterious to the baby and a sudden increase in proteinuria over 3 grams per day should be considered aminous, and efforts should be made to deliver the patient soon.

In respect to the blood hematocrit or hemoglobin, most patients with convulsions show a hemoconcentration which is reflected by a sudden increase in cellular elements of the blood. Hematocrit readings can be used as a reliable index of how sick a patient has become. If hemoconcentration is present, efforts must be made to combat it. Hypertonic glucose (20 per cent in 1,000 cc. amounts) administered intravenously may accomplish this objective, and may temporarily prevent eclampsia.

INDICATIONS FOR TERMINATION

There is no specific medical treatment for toxemia of pregnancy. All so called medical managements are no more expectant. The only definitive treatment is obstetrical, delivery under opportune conditions at an opportune time for the infant and mother.

TABLE V

INDICATIONS FOR TERMINATION

1. The systolic blood pressure is constantly 170 or shows a persistent daily increase.
2. The proteinuria suddenly increases over three gram per day.
3. The weight gain in hospital on treatment exceeds ½-pound per day.
4. Edema of face and hands appears.
5. Cerebral, visual or gastrointestinal symptoms arise.
6. Oliguria, anuria or hematuria occur.
7. The blood NPN is 50 mg. % or more.
8. Jaundice develops.
9. A pulse rate of 120 or more is present.
10. Edema of the lungs or cyanosis is present.
11. The blood is concentrated (hemoconcentration).

And, it should be added, delivery should be accomplished by as short a labor and by as little trauma as possible. Patients hospitalized for toxemia of pregnancy should be followed carefully. Our routine management is as follows: daily weights, a careful charting of intake and output, a daily determination of the amount of protein in the twenty-four hour urine specimen, periodic checks of the hematocrit (packed cell volume) or hemoglobin, a record of the blood pressure twice a day, and a careful interrogation each day for symptoms (Group B, Table IV). To avoid eclampsia or fetal death, the pregnancy should be terminated whenever any of the following conditions persist or increase despite treatment.

1. The systolic blood pressure is constantly 170 or shows a persistent daily increase.
2. The proteinuria suddenly increases over 3 gm. per day.
3. The weight gain in the hospital on treatment exceeds a half pound each day.
4. Edema of the face and hands appears.
5. Cerebral, visual gastrointestinal symptoms arise.
6. Oliguria, anuria or hematuria occur.
7. Jaundice develops.
8. The blood NPN is 50 mg. per cent or more.
9. A pulse rate of 120 or more is present.
10. Edema of the lungs or cyanosis is present.
11. The blood is concentrated as indicated by an abnormal increase in cellular elements (hematocrit or hemoglobin).

TREATMENT OF ECLAMPSIA

Various regimens have been used for the treatment of eclampsia, most of them with good results. These regimens have certain principles in common, which in themselves, probably account for these favorable results: sedation to control the convulsive seizures, an adequate urine output, and the non-

TABLE VI
TREATMENT OF ECLAMPSIA

1. GENERAL Constant observation. A retention catheter, TPR and blood pressure hourly. Oxygen for cyanosis.
2. CONVULSIONS Na Amytal 3 grains I. M. from 6-8 hours, 50% magnesium sulfate, I. M., 8-12 c.c. initially and 4-8 c.c. over 4-8 hours, chloral 30 grains as starch enema 6-12 hours morphine if these drugs fail, occasionally veratrone.
3. ELIMINATION S. S. enema after sedation.
4. RENAL AND CEREBRAL 1,000 c.c. 20% glucose to insure output. Repeat in 8 hours.
5. PREGNANCY Rupture membranes to hasten or induce labor. If cervix uneffaced c. s.
6. PULMONARY EDEMA Venisection or high spinal.
7. DIET No food until conscious. Afterward fruit juices for 24 hours.

traumatic delivery, preferably per vagina. This may be accomplished in some cases within a relatively short time (a few hours). Regimens which insist that the patient must be treated medically for at least twenty-four hours suffer from short sightedness, for the patient and the baby may be dead within that period of time. The following regimen has been used for over ten years. In addition, a large number of severe pre-eclampsia patients have been treated in a similar manner with good results.

1. General: Constant observation, preferably by a nurse or doctor. A retention catheter is used with an hourly record of urine excretion until the patient is conscious. Temperature, pulse, respirations and blood pressure are recorded hourly. Oxygen is used for cyanosis. Eclamptic patients are sick and should be treated gently.

2. Convulsions: Use either two or three of the following drugs: sodium amytal three grains intramuscularly, every six to eight hours; 50 per cent magnesium sulfate intramuscularly with an initial dose of eight to twelve cc. and four to eight cc. subsequently every four to eight hours as indicated for a total dosage not to exceed 40 cc. in twenty-four hours; chloral hydrate in doses of 30 grains in 100 cc. starch water per rectum every six to twelve hours. Morphine should not be used unless the three drugs mentioned fail. Occasionally, veratrane three to five mm. intramuscularly may be used in patients with blood pressures over 200 systolic which do not respond.

3. Elimination: A soap suds enema is given after sedation.

4. Renal and Cerebral Symptoms: An intravenous injection of 1,000 cc. twenty per cent glucose solution is given within 40-60 minutes. This may be repeated in eight hours if necessary, and should insure a urinary output of at least 30 cc. per hour. Occasionally, 600 cc. of a 30 per cent or 400 cc. of a 50 per cent glucose solution may be necessary. Hypertonic solutions (20 per cent or greater) should not be given for over thirty-six hours because of the danger of pulmonary edema. Saline, Ringer's lactate and bicarbonate solutions are contraindicated.

5. Pregnancy: If the patient is in labor, delivery is hastened by simple rupture of the membranes. If the patient is not in labor, an inducation with rupture of the membranes and trial of labor should be considered or a cesarean section, particularly in the patient with an uneffaced cervix. Cesarean section may be used in the severe eclamptic patient who is not in labor and who does not respond to treatment.

6. Pulmonary Edema: Venisection may help. High spinal or caudal anesthesia is beneficial if technically possible. Spinal tap does not help.

7. Diet: No food is given while the patient is unconscious. Afterward fruit juices are given for the first twenty-four hours.

Postpartum eclampsia, which carries a higher mortality rate, is treated in a similiar manner with the exception that delivery is no longer necessary. The sick patient with eclampsia or severe pre-eclampsia should be carefully followed after delivery to prevent further convulsion. Our management includes the following: an inlying catheter with an hourly check of urine output, hourly blood pressures, continued sedation, and the administration of hypertonic glucose (1,000 cc. of 20 per cent) at least once and possibly twice (8 hours later) after delivery. After twenty-four hours, most patients are out of danger.

The practicing physician may seek consultation for the treatment of eclampsia. Consultation in such cases is unquestionably desirable. However, I do not believe eclamptic patients should be brought long distances by any means of transportation to teaching centers for care. It is far better for the patient if the consultant comes to her bedside.

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FIREWORKS BILL

The American Medical Association has filed a statement with the House Judiciary Committee supporting its bills restricting the sale of fireworks.

The statement said that the medical profession for many years "has been concerned with the serious menace to life and health resulting from the use of fireworks." It added that the Association is in favor of proposals such as the bills under consideration, "which are designed to alleviate health hazards of this type."

The bills would prohibit the shipment of fireworks into any state or political subdivision in which their sale is prohibited, unless intended for public displays or other purposes specifically authorized by law.

Subdural Hematoma in the Absence of Objective Neurologic Findings*

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A striking and beguiling characteristic of subdural hematoma is its proclivity for parading in a cloak of various and complex symptoms. The effective definitive treatment for this lesion has changed little since its recognition as a distinct entity apart from the so-called "pachymeningitis hemorrhagica interna" of Virchow almost one hundred years ago. Rather, the problem today is concerned with the clinical appearance of subdural hematoma as a syndrome necessitating early forthright recognition to assure a successful therapeutic outcome. Although pardonable, failure to accord a subdural hematoma appropriate treatment is tragic. The usual concept of the clinical picture is envisioned as a group of neurologic symptoms, accompanied by certain objective neurologic findings, and anteceded by a history of trauma to the head. The pattern does not fit this well in actual practice.

The etiologic factors are usually classified as "spontaneous" or "traumatic." However, there are those who maintain that subdural hematoma results from trauma alone, trivial though it may be. Inasmuch as in some cases even most persistant detailed questioning fails to elicit a history of antecedent trauma, it would seem logical to assume that some non-traumatic process were responsible. It would not appear amiss that spontaneous hemorrhage may be due to a primary vascular injury associated with a hemorrhagic diathesis or with an acute or chronic infectious disease. Similarly, degenerative vascular changes could conceivably be responsible. Whatever the etiologic factor, the source of bleeding is thought to be from the vessels traversing the subdural space. The majority of the cerebral veins terminate by passing from the surface of the cerebrum into one of the large venous sinuses. Most of the veins passing from the brain to the tributaries of the longitudinal sinus are short trunks and extend directly from the brain to the dura at right angles with no tortuousity to allow for possible movement of the brain. Such veins have their cranial ends firmly fixed by the rigid dura while the cerebral ends are attached to the movable hemisphere. Hence, a sharp blow can easily produce a good deal of cerebral dislocation with rupture of these veins. Some (A. B. Baker e. g.) have contended that the hemorrhage is actually intradural rather than subdural. This concept which predicates bleeding from the intradural capillary plexus, does not demand of trauma such a predominant role, but rather focuses attention on the local susceptibility and systemic diseases. Kunkel and Dandy stated that in their series in which patients with fresh subdural clots showing immediate symptoms of severe injury were absent, 36 percent of the patients presented no history of even a trivial injury despite their constant interest in this phase of the lesion. Whatever the true nature of hematoma may be, it would appear that the role of trauma in the production of this lesion has been overemphasized. This fact probably accounts in part for some of the "missed" cases.

The symptoms of subdural or intradural hematoma are variable and may simulate almost any type of brain lesion. The most frequent symptoms as listed by Heersema and Freeman are:

	Per Cent of Cases
Headache	96
Coma	40
Nausea and vomiting	36
Dizziness	28
Confusion and defective memory	20
Excitement	16
Drowiness	12
Convulsions	8
Numbness	4

The principal symptoms most commonly associated with subdural hematoma, then, are those stemming from increased intracranial pressure. A patient presenting himself with the complaints of headache and altered mental state should be suspected of harboring an expanding intracranial lesion. It should be noted that 88 percent of the patients in Heersema's series exhibited an abnormality of the plane of consciousness. The fluctuating state of consciousness in these patients is a feature of importance in suggesting a diagnosis. The change may vary from a lapse of memory to aberrations in behavior to frank coma. In some instances, it is reversible to some degree. This fluctuation may be seen in brain tumors, but is said to be generally more characteristic of subdural hematomas.

Headache is the most constant and persistent complaint. It may be unilateral but often is generalized. Usually it is described as being more or less constant and throbbing.

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*Read before Annual Convention Nebraska State Medical Association, May, 1951.

In spite of the fact that the symptoms of subdural hematoma may be severe to the point of incapacitation, the associated objective neurologic findings may be surprisingly sparse or non-existent. The following are the principal neurologic signs recorded in the series of Heersema and Freeman above:

	Per Cent of Cases
Paresis and spasticity (bilateral)	24
Paresis and spasticity (unilateral)	12
Babinski (bilateral)	24
Babinski (unilateral)	12
Paresis of III Nerve	20
Paresis of VII Nerve	20
Anisocoria	8

Thus, roughly, only one patient out of three presented objective neurologic signs to suggest the presence of a pathologic intracranial process. Some authors, however, have recorded a significantly higher percentage of objective findings in their particular series.

This seemingly incongruous circumstance, the absence of objective neurologic findings in the presence of a large subdural hematoma, can best be explained on the basis of a physico-chemical process functioning in hematoma formation. Blood trapped in the subdural space does not absorb. It liquefies and the resultant fluid becomes one high in protein content. Since this thick fluid is separated from the subarachnoid space only by the arachnoid, and since this membrane is impermeable to the large molecules of protein in the liquefying blood, the osmotic imbalance which is set up between the cerebrospinal fluid and this denser fluid results in the flow of fluid into the subdural space. Later, with the breakdown of the hemoglobin molecules, there is an even greater increase in molecular concentration and consequent enlargement of the subdural clot.

It would appear that the brain successfully resists succumbing to this slow, gradual process of encroachment until a point is reached where "too much is too much" and cerebral function becomes compromised. Then objective neurologic findings may appear. In some instances, the hematoma may be massive in size, and yet the neurologic examination may be essentially normal.

Although not neurologic signs, two findings are often of significant diagnostic importance — papilledema and a slowed pulse. A choked disc may be the solitary objective finding indicating the presence of a hematoma. A slowed pulse is usually the rule. This slowing may be intermittent.

The following three cases will serve to illustrate some of these points:

Case 1 — J. G., an athletically inclined girl aged 11, was struck on the head by a baseball bat about 5:00 p.m. on May 9, 1950. She was stunned momentarily and then continued playing ball. An hour later she complained of a left parietal headache and became comatose. On arrival at the hospital, right-sided weakness was noted with hyperactive deep tendon reflexes and a positive Babinski on that side. The pupils were equal. The pulse fluctuated between 64 and 70. Blood pressure measured 108/68. X-rays taken at the time disclosed a linear fracture over the left middle meningeal artery.

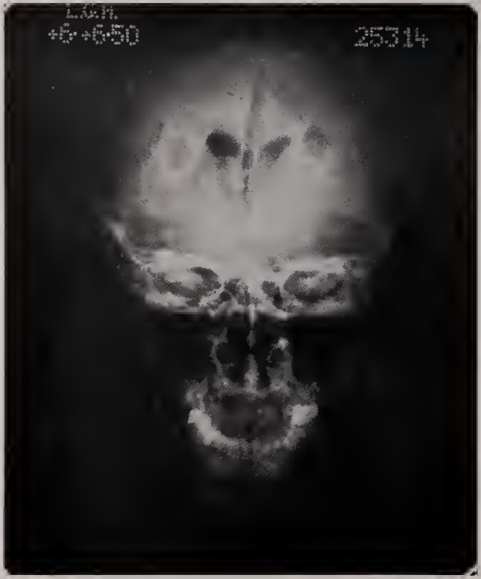

Figure 1

An extradural hematoma was suspected, but while preparations were being made for surgery, it was noted the patient's condition began improving. Observation was continued and by the following morning, definite improvement had been noted.

Although a bilateral lateral rectus palsy developed and bilateral papilledema appeared, the patient so improved otherwise she was dismissed to her home where periodic examination was continued.

All objective neurologic signs disappeared. However, because of persistent headache and unresolving papilledema, ventriculography was performed on June 6, 1950. The anterior horn of the left lateral ventricle was displaced to the right and inferiorly (Figs. 1 and 2). A left fronto-parietal craniotomy was performed and a solid clot about one-half the size of a clenched fist was encountered overlying the frontal lobe and was removed. Recovery was uncomplicated and complete.

This case illustrates the importance of repeated ophthalmoscopic examinations. There were no residual objective neurologic findings just prior to surgery.

Case 2 — W. H. M., a man aged 22, had been complaining of headaches intermittently since July, 1949. These were often present on arising, were aggravated by stooping and were accompanied by vomiting. He had also become forgetful recently. There was no history of head injury. On admission to the hospital in July of 1950, pulse varied from 60 to 80. Blood pressure measured 136/70. Neurologic examination was essentially negative except for a transitory and inconstant Hoffman reflex on the left. Ophthalmoscopic examination disclosed a bilateral papilledema of 2 to 3 diopeters elevation.

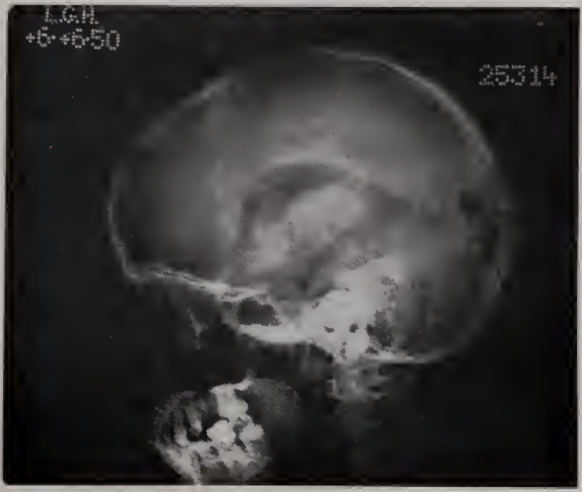

Figure 2

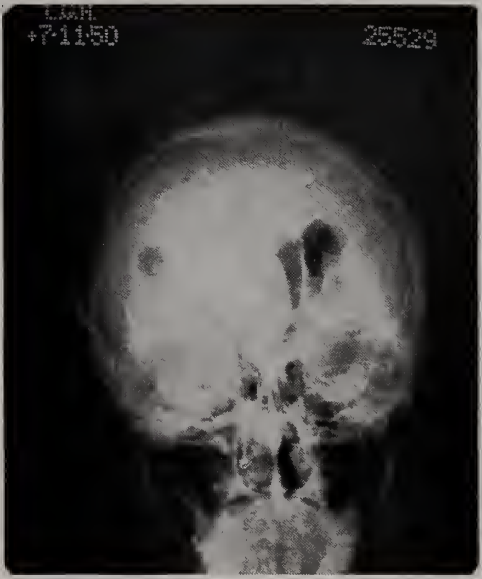

Figure 3

Ventriculography disclosed a gross shift of the ventricular system to the left (Fig. 3). A right fronto-parietal craniotomy was performed and an estimated 350 to 400 cc of liquefied blood was removed. A septal membrane dividing the hematoma into two compartments was encountered and resected. Recovery was uneventful.

In spite of an amazing degree of encroachment upon the brain by the hematoma in this case (the surface of the brain was removed fully two inches from the inner table of the skull) objective neurologic findings were absent.

Case 3 — C. A., a man aged 59, noted the onset of left-sided headaches on June 12, 1950. These were aggravated on assuming the upright position and were becoming progressively more severe. The patient became progressively more drowsy, confused and disoriented. His memory became poor. He was admitted to the hospital on June 19, 1950. His past history was pertinent in that a grade 2 squamous cell carcinoma of the urinary bladder was identified at the time of resection in 1944. During February, 1950, he had had a "stroke" with reportedly left sided neurologic findings.

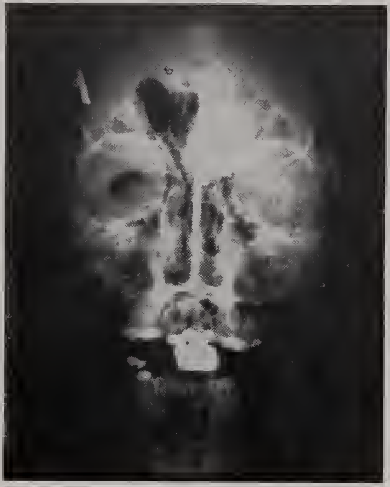

Figure 4

Examination disclosed only a slowed pulse (64-84). There were no objective neurologic findings and no papilledema. Pneumoencephalography disclosed a gross shift of the ventricular system to the right (Fig. 4). A craniotomy was performed and approximately 250 cc of dark-colored fluid was evacuated. The patient was ambulatory on the third postoperative day.

Although objective findings again were absent in this instance, the headache and altered mental state suggested an expanding lesion and led directly to further surgical diagnostic procedures.

SUMMARY

Objective neurologic findings may be completely absent even when a subdural hematoma is massive in size. The probable reason for this seeming discrepancy is the fact that the hematoma expands gradually by omosis of cerebrospinal fluid through the arachnoid.

Diagnosis is based largely on a history of trauma (though not necessarily) and on the progressive nature (often with fluctuation) of the symptoms. Persistent headache with personality change should suggest the possibility of a hematoma.

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Diverticulitis May Mask Carcinoma of the Colon

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When diverticula are associated with an obstructive lesion of the colon in the radiographic studies of the barium enema, it is often difficult to determine whether the obstruction is due to diverticulitis or to carcinoma.

Diverticulosis is a term used to describe the out-pouchings of the bowel in which the sacs have small necks. The acquired diverticula occur more frequently in the older age group, and are formed by a herniation of the mucosa through the muscle of the intestinal wall. The incidence of diverticulosis in radiographic examinations of the colon was reported by Pemberton(4) to be 8.5 per cent. When these diverticula become inflamed due to obstruction, the diagnosis of diverticulitis is made. Diverticulitis occurs in about 15 per cent of the cases of diverticulosis according to Bennett-Jones(1). Mayo(3) reports that of 202 cases of diverticulitis which were resected. The diverticulitis was located in 198 of these cases.

Diverticulitis creates a stenosing lesion in the bowel. The pathological changes are characterized by marked fibrous infiltration of the muscularis and subserosa. If a perforation develops in a diverticulum, a very extensive induration and thickening occurs in the bowel and in the surrounding tissue. Rankin and Brown(5) observed that the obstruction which results from diverticulitis is due to an extrinsic inflammatory reaction and contraction of the various coats of the bowel beginning from the outside, in contradistinction to that produced by carcinoma in which the contraction begins from within. Although the pathology is different, both diverticulitis and carcinoma produce a stenosing lesion which often is difficult to differentiate either clinically or by the radiographic examination with the barium enema.

The association of carcinoma and diverticulitis in the same patient is reported to be infrequent. Rankin and Brown(5) state that out of 227 cases of diverticulitis, carcinoma was encountered in only 4 cases. It is interesting to note, however, that we have resected 12 cases during the last 3 years which showed an obstructing lesion of the bowel associated with diverticula, and 4 of these were malignant. These 12 cases are not a large enough series to be significant; however, they do imply that when a patient has a bowel obstruction with diverticula present, we cannot take it for granted that the obstruction is due only to diverticulitis. We cannot even be sure of the diagnosis in some cases when we can palpate the lesion at the time of the abdominal exploratory examination.

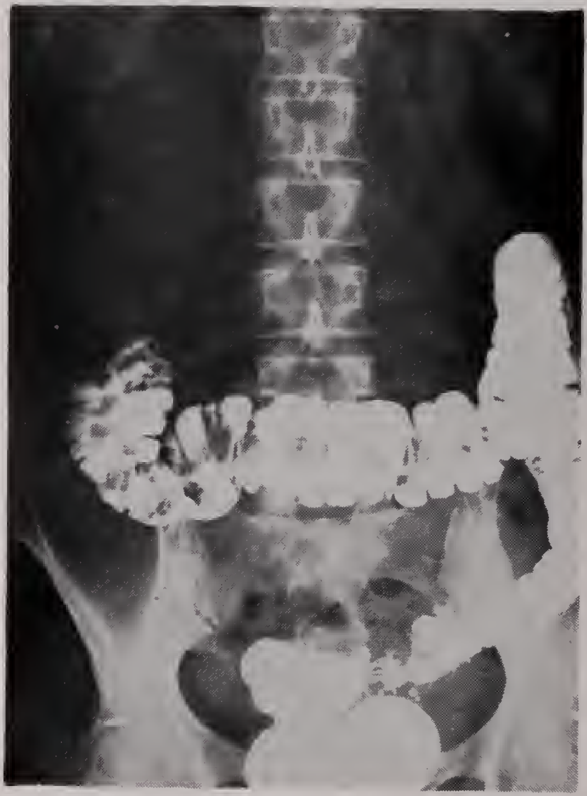

Fig. 1, Case II. Chronic diverticulitis with an associated chronic perforation.

The following outline shows the differential diagnosis between diverticulitis and carcinoma.

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*Read before Annual Convention Nebraska State Medical Association, May, 1951.

DIVERTICULITIS

1. Variable weight loss or none.
2. Early perforation.
3. Long history of intermittent obstruction.
4. Long spindle-shaped defect.
5. Blood in the stool rare.
6. Stenosis and diverticula openings found proctoscopically.

CARCINOMA

1. Progressive weight loss.
2. Late perforation.
3. Progressive obstruction.
4. Short "apple core" defect.
5. Frequent blood in the stools.
6. Tumor visualized proctoscopically.

Blood in the stools from diverticulitis is reported to be about 10 per cent by Boyden(2). At times the mucosa at the base of a diverticulum opening is erythematous and friable, and this condition does give blood with the stools. It is much more common, however, to have blood in the stool from a neoplasm.

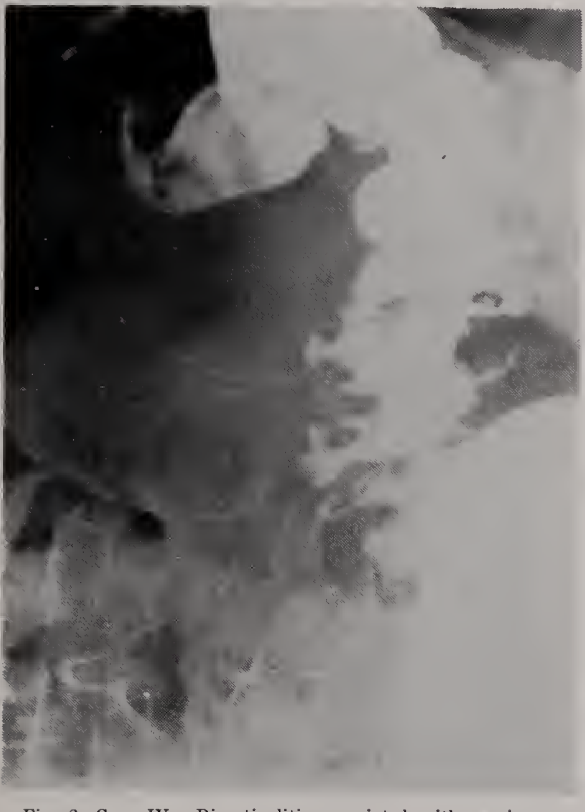

Fig. 2, Case IV. Diverticulitis associated with carcinoma.

The following case histories are presented to illustrate the diagnostic problems encountered with these cases.

Case 1 showed extensive diverticulosis with obstruction in the rectosigmoid. This occurred in a 68-year-old male with a four months' history of obstruction. He had no blood in the stools, but he did have a 10-pound weight loss. The diagnosis was made easy by visualizing a tumor mass in the proctoscopic examination at the 12 cm. level. The lesion was resected with an abdominoperineal resection using the Mile's technic.

Case 2 presented more of a diagnostic problem. This patient was a 55-year-old woman who had a partial obstruction associated with "intestinal flu" six weeks previously. She had passed streaks of blood in her stool on one occasion and she had a 5-pound weight loss. A tender mass, 5 cm. long, was palpable in the pelvis. The radiographic examination revealed much spasm in the sigmoid area with numerouse diverticula. There was a roughness along the inferior border of the sigmoid. Our impression was diverticulitis with carcinoma not being ruled out of the diagnosis. The patient was explored. The sigmoid was thickened and firm with an adjacent mass measuring 5 cm. in the mesosigmoid. The diagnosis was chronic diverticulitis with an associated chronic perforation. The lesion of the sigmoid was resected with a two-stage obstructive type of resection, because we were unable to adequately prepare the bowel pre-operatively.

Case 3 is a 74-year-old white woman who had signs of bowel obstruction associated with a tender mass in the left lower quadrant. A radiographic examination showed much resistance in the sigmoid with spasm and diverticula. She returned a year later with intermittent bowel obstruction and some bleeding. Following radiologic study she was explored and we found an extensive diverticulitis with carcinoma in the upper sigmoid. Many inflammatory adhesions were present and the mass was fixed to the peritoneum in the left gutter. This lesion was exteriorized and resected with a two-stage obstructive type of resection due to the chronic inflammation and extensive diverticulitis in this segment of bowel.

Case 4 is a white female, age 70, who had a history of diarrhea at intervals for six months. There was mucus in the stools but no blood. She had periods of elevated temperature and chills. The first radiographic examination of the colon showed a complete obstruction in the sigmoid, but a week later a second examination revealed a very constricted area with much spasm and multiple diverticula. She was explored and an extensive tumor, measuring 10 cm., was present in the sigmoid and attached to the posterior aspect of the bladder. The tumor in the sigmoid was resected as was the involved portion of the bladder which measured 4 cm. in diameter.

Case 5 is a 41-year-old male who suddenly developed an obstruction in the left lower quadrant. The obstruction was gradually relieved with enemas. A barium enema at that time showed diverticulitis in the upper sigmoid region. We saw him one month later. At this time he had some constipation, a 20-pound weight loss, and a hard mass 14 cm. long, in the lower left quadrant. His barium enema was interpreted as diverticulitis with a question of new growth being present. He returned in three weeks at our request with a history of bloody stools and progressive weight loss. An exploratory operation was performed, and an extensive carcinoma was found in the upper sigmoid with attachment to the abdominal wall and three loops of ileum.

The case reports have been presented as evidence that when an obstruction of the colon does occur in the presence of diverticulosis and diverticulitis, it is often difficult to rule out the presence of carcinoma. An early exploration of these cases is advocated with a resection of the involved segment of bowel.

Antibiotics and better pre-operative preparation of the patient have reduced the surgical mortality in these cases so that it is a relatively safe procedure. Pemberton(4) reports a mortality of 2.7 per cent on 111 patients who underwent a resection of the involved segment of bowel during the years 1941 to 1945. In view of this low mortality, diverticulitis of the bowel with recurrent episodes of obstruction may well be treated by a resection of the involved bowel.

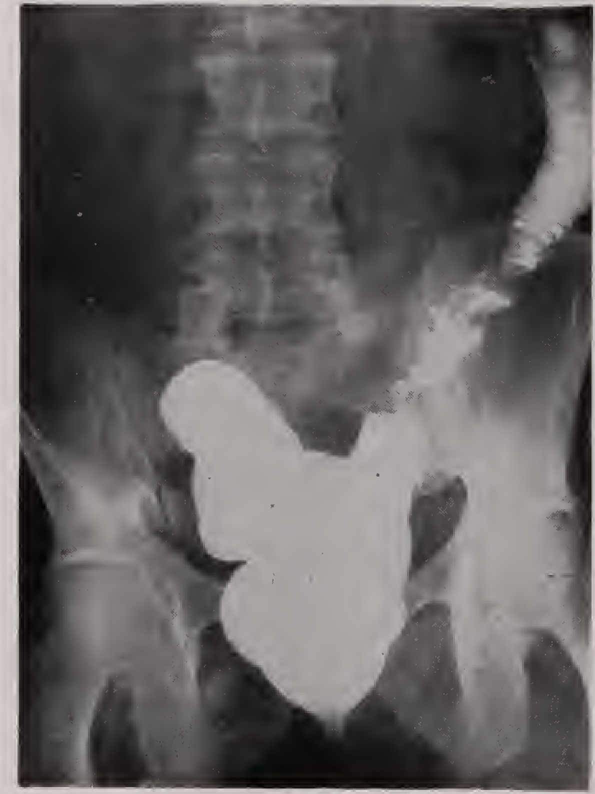

Fig. 3, Case V. Diverticulitis associated with carcinoma.

In cases of acute obstruction and perforation of the bowel due to diverticulitis a complete diversion of the bowel should be made with a transverse colostomy. The inflammation around the diverticula can then be treated with antibiotics. The obstructed bowel resulting from the diverticulitis can be resected at a later date with an end-to-end anastomosis done at that time. The third stage of the operation is accomplished by closing the transverse colostomy.

In these cases in which the diagnosis of the obstructive lesion cannot be definitely made, the bowel should be explored early. A resection of the lesion and a one-stage end-to-end anastomosis can be made if the condition of the bowel is satisfactory. If there is too much obstruction or inflammation in the bowel to do a primary end-to-end anastomosis, the involved bowel may be exteriorized and resected with a two-stage obstructive type of resection. The two-stage procedure is especially applicable in the presence of chronic stenosis and infection resulting from the diffuse diverticulitis. Whether the disease is inflammatory or malignant, the offending section of bowel is removed.

CONCLUSION

1. My purpose in presenting these cases is to point out that one cannot always rule out carcinoma when one finds diverticulitis with an obstrucion of the colon.

2. In general we are exploring earlier these cases which have localized areas of obstruction associated with diverticula.

3. The type of resection must be individualized to fit the condition and pathology of the bowel.

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EARLY CANCER DETECTION

A woman who has an ideal cancer detection examination of the cervix with no abnormal findings may be reasonably sure that no clinically important cervical cancer will develop within six months, and perhaps longer.

This opinion was expressed by Dr. Howard W. Jones, Jr., of Baltimore in the July 28 Journal of the American Medical Association.

According to Dr. Jones an "ideal" examination should consist of a smear study, microscopic examination of tissue removed from abnormal tissue, and history-taking.

He pointed out that cancer of the cervix is responsible for about one out of every seven female cancer deaths. Cervix cancer, he said, in many instances has an insidious development and when symptoms appear the disease is far advanced. Consequently, he stressed the importance of smear and biopsy studies in cases of abnormal cervixes where no symptoms have developed. Inspection alone is not a reliable diagnostic method for small cancers,

Primary Dysmenorrhea—Its Gynecological, Physiological and Psychiatric Aspects

A Review of the Literature

GEORGE R. PULLMAN, M.D.
Omaha, Nebr.

INTRODUCTION

The problem of primary or intrinsic dysmenorrhea, the menstrual pain so often observed in the entire absence of any anatomic abnormality of the pelvic organs, is one of the oldest in gynecology (1), yet we do not seem much nearer a solution of its etiology than our predecessors of a hundred years ago. The disorder is often spoken of as a minor gynecologic ailment, but it probably causes a greater aggregate of human pain than almost any other disease or disorder of the pelvic glands. The study of cases of Primary Dysmenorrhea should be nothing short of a far-reaching investigation into the gynecologic, physiologic, and psychologic life of the patient.

GYNECOLOGICAL ASPECTS

ANATOMIC LESIONS

It is now generally agreed (Randall & Odell(2)) that there is no consistent anatomic lesion in patients suffering from primary dysmenorrhea and that earlier investigators have erred in attributing the cause directly or indirectly to some obvious or obscure anatomic finding. The presence of anatomic defects is apparently incidental and primary dysmenorrhea must be explained on some other basis. There is need, however, for careful study and examination looking to the discovery and removal of any responsible pelvic pathology.

ONSET OF PRIMARY DYSMENORRHEA

Primary dysmenorrhea commences with the menarche in 65% and a few years later in 35%, Hirst(2). The pain, according to Randall and Odell(2) starts with the menstrual flow. It persists through one or two days of the flow. The woman with primary dysmenorrhea may complain of prodromal irritation, bachache, headache, and gastrointestinal upsets. The pain may vary from month to month.

RELATIONSHIP TO CHILDBIRTH

The dysmenorrhea ordinarily disappears or is considerably relieved after the birth of the first child (2). After the age of 30 in the mulliparous woman the dysmenorrhea becomes irregular and of lessened intensity, and near the menopause it usually disappears.

SUBJECTIVE SYMPTOMS

In studying the individual case, one is struck by the multiplicity of subjective symptoms making up the dysmenorrhea complex. Probably in no two individuals are they exactly alike (3). There may be epigastric distress, nausea with or without vomiting, lassitude, excessive nervous tension, and headache of variable onset, location and duration. Many patients with dysmenorrhea bruise easily. It apparently is of more than chance occurrence that many of these patients are relatively free from constipation. The pattern in each patient seems to be quite constant, but may vary at alternating periods possibly due to ovulation from one or the other ovary. The commonest type of pain complained of by patients studied by Taylor(4) was an ache. Intermittant colicky pain was the rule in the severe cases of dysmenorrhea, but it was also present in some of the slight cases. Colicky pain was almost always restricted to one or two hours before or after onset of the flow, when the aching pain was also at its worst. The aching pain was more variable in time and duration. It was also much more variable in site.

Beckwith Whitehouse(5) thinks that pain is probably associated not with the expuslion of pieces of endometrium from the uterus, but with their separation from the uterine wall. He considers that retention of some of these pieces in the uterine cavity may, by irritation, cause excessive decidual formation during the next cycle, and conversely, complete evacuation may be followed by a lesser reaction. This would explain the intermittency of the pain.

RELATIONSHIP TO OVULATION

Kurzok(2) observed that primary dysmenorrhea does not occur without ovulation. Sturgis and Albright(2) were able to produce proliferative endometrium just prior to menses by intramuscular estradiol benzoate and the succeeding periods were painless. This work was supported in selected cases by endometrial biopsies which revealed no evidence of ovulation when the therapy had abolished pain. Sturgis further found, however, that when estrogenic therapy was given for primary dysmenorrhea for several months the pain returned in spite of continuance of the treatment.

PHYSICAL FINDINGS

Murray(5), found numerous signs of underdevelopment or atypical development: the infantile uterus—or the small uterus with a conical cervix—or one that is acutely anteflexed or retroflexed, or some such modifications. Such uteri are more likely to be associated with spasmodic dysmenorrhea than those normally developed, and when the menstrual loss is normal in amount and periodicity.

Investigations should be turned to the physical condition and general health of the patient. A study of the nutritional state and metabolism should be included. The anemias and blood dyscrasias should be sought for and corrected where possible. Adams and more recently Billig(2), have proposed the thesis that dysmenorrhea may be caused by a postural defect resulting in contracted ligamentous bands of the pelvic fascia. Billig states that at the time of menstruation, due to the action of the ovarian hormone, there is further shortening of these bands resulting in irritation of the spinal nerves passing through and by them.

Apparently the cyclic phenomonen of menstruation and dysmenorrhea places additional stress upon the patient and exposes other subclinical conditions.

PHYSIOLOGICAL ASPECTS
ENDOCRINE FACTORS

In the light of the present knowledge of hormone physiology, the mechanism of primary dysmenorrhea follows the following pattern, Greentree(6):

A. Estrogen is thought to be a vasodilator, a diuretic, and an excretor of sodium chloride from the human body by:

1. Being cholinergic, liberating vasodilator parasympathetic acetycholine.

2. Inhibiting the pituitary gland.

Rock(7) believes that small daily doses of estrogen will stimulate the pituitary gland while larger doses, over 500 R.U., will depress this gland. Decreased activity of the pituitary gland could cause:

a. Decreased secretion of pituitrin, which is antidiuretic, a vasopressor, and oxytocic.

b. Decreased secretion of the adrenotropic factor by the pituitary gland would lessen adrenal activity, causing:

1). Decreased secretion of desoxycortisterone hornone by the adrenal cortex, with a resultant diuretic action and loss of sodium chloride.

2.) Decreased secretion of adrenalin, causing a vasodilatation.

B. Progestrin, formed after ovulation, tends to nullify this action of estrogen. Thorne(7) believes that progestrin resembles desoxycortiscosterone in its electrolytic action. Normally a high plasma level of sodium chloride will stimulate the posterior pituitary gland causing a retention of fluid to dilute the concentrated extra-cellular fluid. A low plasma level of sodium chloride will inhibit the posterior pituitary gland, causing diuresis.

EFFECTS OF PITRESSIN AND PITOCIN

Woodbury(8) found that dysmenorrhea can be produced in control patients and intensified in dysmenorrheic patients by intravenous injections of small quantities of pitressin and by stretching the uterus or cervix. It could not be produced with intravenous injections of acetyl choline, histamine, or pitocin in quantities which produced side reactions. In some patients pitressin has greater uterine stimulative action than pitocin.

THE ROLE OF THE THYROID

The effect of thyroid upon dysmenorrhea is shown by the basal metabolism test. Thyroid frequently aids in solving the difficulty. Anderson and Reich(9) believe that the BMR should be determined for every patient suffering from dysmenorrhea. Hypoplastic uterus is sometimes associated with hypothyroidism.

ANDROGEN THERAPY IS SOMETIMES WORTHY OF TRIAL

It is evident, then, that the menstrual cycle which is the objective result of a delicately balanced interaction of the pelvic organs controlled by hormones but subject to other influences, can be upset by the artificial administration of the various hormones. It should therefore also be possible to correct some of the abnormalities by administration of artificial hormones. Without the influence of endocrine secretion no menstruation is possible so they must certainly play a major part in the normal and abnormal sequences of menstruation. Probably their chief role consists in setting the stage preparatory to a multitude of reactions which occur in the myoneural, vascular, and endometrial tissues.

MENSTRUAL TOXIN

Smith and Smith(3, 7) have demonstrated the presence of a fibrinonolytic toxic euglobulin in the circulating blood of menstruating patients. The experiments of Seyle(7) tend to strengthen the concept that cellular injury from any cause will liberate a vascular poison, which, by stimulating the adrenotropic factor of the anterior pituitary gland causes adrenal hypertrophy along with an increased sympathetico-adrenal discharge. This mechanism of dysmenorrhea in ovulatory menstrual cycles, therefore, is believed to be dependent upon:

1. Increased vasoconstriction due to:

a. More menstrual toxin being formed in ovulatory menstruation than in anovulatory menstruation.

b. Progesterone, formed after ovulation, tending to nullify the vasodilating action of estrogen.

2. Increased amplitude of the uterine muscular contractions following ovulation.

3. Increased sensitiveness to the pain impression reaching it. This increased irritability of the cerebral cortex is due to the premenstrual edema and ischemia of the brain which takes place after ovulation.

THE MYOMETRIUM

Knaus(10) filled the cavity of the uterus with sterile oil and registered the changes in uterine pressure on a kymograph attached to an insuflator placed in the cervix. He found rhythmic contractions present during the first 14 days of the cycle. During this period, the uterus responded by contracting to the intravenous injection of preparations of the posterior pituitary gland. From the 16th day to just before menstruation, spontaneous contractions were absent, and the uterus failed to contract following the intravenous injection of posterior pituitary extract. Moir(11), using the intrauterine balloon method, noted that myometrial activity was greater during the first and second days of menstruation than at any other portion of the cycle. In the presence of pain, he invariably found frequent and irregular contractions, during which intrauterine pressures of 120 mm of Hg or more were observed. Moir reasoned that pain might be due not to the uterine spasm as such, but to a diminution of blood flow during contractions, resulting in local ischemia of the myometrium.

Nulliparous patients as a group accomodate less distension of the balloon than was tolerated by parous patients (3). Bearing a child apparently increased the tolerance of the uterus to stretch by enlarging the uterus. This may account for the relief of menstrual distress after childbearing in some, but certainly not in all individuals.

In summary (10), the following states express the contradictory opinions concerning uterine psysiology:

1. Uterine activity is greatest just prior to ovulation.

2. The strongest uterine contractions occur at onset of menses.

3. Painful menstruation is accompanied by excessively strong contractions resulting in high intrauterine pressures.

4. There is no relation between cramps and the strength of uterine contraction or the height of intrauterine pressure.

5. Dysmenorrhea does not occur in the absence of a secretory endometrium.

VASOSPASM THEORY

Much of the pain may be due to the stimulation of nerve endings in small blood vessels as a result of vasospasm, Griffith(12). A painful stimulus resulting from some other cause such as uterine contraction could cause a reflex vasospasm via the sympathetic nervous system. The pain resulting from this vasospasm would bring about a further sympathetic discharge and in this way a cycle could be established. If this cycle were broken at any place along its course, there might be cessation of the painful element due to vasospasm.

PSYCHIATRIC ASPECTS

Every investigator must realize the tremendous psychologic influence in evaluating the entire subjective symptom of pain, and he must make all effort to use as much objectivity as possible. Almost any type of therapy even with apparently adequate controls has been shown to be successful in the majority of patients in nearly any series studied. These treatments run the gamut of medical and surgical practices.

PAIN THRESHOLDS

Haman(3) found by use of a Pelner sensimeter that these women are more sensitive to pain. The management based upon this concept has been directed to improving the general welfare of the individual by exercises, psychotherapy, and hypnosis. The psychic factor should never be fogotten because the whole symptom-complex is bound around the subjective sensation of pain.

EARLY ADJUSTMENTS

The emphasis on organic or functional defects creates a poor mental attitude. Many patients have frequently approached the menarche already conditioned for a serious ordeal by overzealous relatives and friends. Unhappiness in the home, martial discord, anything which might influence the emotional life of the patient should be investigated and suitable advice offered. Wittkower and Wilson(12) in a study of 57 patients with primary dysmenorrheas, and a control group of 30 patients (prima-gravida who had suffered from dysmenorrhea) found that as children, the dysmenorrhea group showed psychological maladjustments four times as often as the control group.

PHYSICAL AND MENTAL FATIGUE

It is well known that strain and fatigue, both nervous and physical, play important parts in the etiology of dysmenorrhea(13). Investigations should, therefore, include the habits, living conditions, personal hygiene, diet and occupation of our patients. In this connection it is an interesting observation to note that dysmenorrhea is seldom encountered among girl athletes, swimmers, and dancers. Active outdoor exercises should therefore be encouraged.

THE CENTRAL NERVOUS SYSTEM

According to Greentree(6), anxiety can cause the thalamus to become hypersensitive, so that the pain interpretation of the afferent sensory impulses may be exaggerated. The cerebral cortex receives an impression of pain which increases vasospasm, thus producing pain and setting up a vicious cycle.

Recent researchers into the integration of the endocrine system, and the relation between the cerebral cortex, the diencephalon and the pituitary gland, are beginning to throw light on the mechanism by which such psychic influences can affect ovarian and uterine function. Langdon-Brown(4) points out that whereas the endocrines were first regarded as an autonomous system acting independently of the central nervous system, the newer conception postulates a controlling center in the diencephalon. The diencephalon has ties in three directions: with the cerebral cortex above, with the pituitary gland below, and with the sympathetic nervous system "of which it appears to be the head ganglion." In this way a psychical experience may record its effects either through the chemical mechanisms initiated through the pituitary, or on the sympathetic acting on the viscera or on other ductless glands.

PSYCHODYNAMICS

Novak and Harnik(4) accept the aching pain as being due to the expulsion of clot or membrane, or to an unusual degree of pelvic hyperemia, but think that every case of true uterine colic has its origin in a psychic trauma. This has most often a sexual basis, but may originate in some other emotional crisis which has only an accidental relation to menstruation. The first attack of dysmenorrhea having been thus produced, succeeding attacks are due to fear of the repetition of the pain, and an inferiority complex engendered by the conviction that something is wrong with the sex organs. Cure results when the original psychic trauma is brought to light, and its role in the production of her dysmenorrhea explained to the patient. This can usually be accomplished is one or two interviews, but cases of exceptional difficulty need psychoanalysis. These authors base their conclusions on their clinical experience of 247 cases of severe uterine colic collected over a period of four years.

HYPNOSIS

According to Kroger(14), through hypnosis, underlying psychosomatic factors may be discovered and effectively removed thereby raising the threshhold to pain. Again through hypnosis and posthypnotic suggestion a block may be established in the nervous pathway between the uterus and the pain center in the the hypothalamus. Hull(4) states "through hypnosis one may have an effective control of higher centers and certain autonomic processes only feebly influenced by voluntary effort." Hypnosis has been used satisfactorily in a small series of cases, but the field of its usefulness is limited by the necessary selection of cases and the scarcity of competent and interested psychiatrists.

SUMMARY

1. The subject of primary dysmenorrhea has been reviewed from the standpoint of its gynecological, physiological, and psychiatric aspects.

2. The pain does not occur in the absence of active uterine contractions; and one or more secondary factors may be present if pain is to occur.

3. Treatment of the disorder could be effective either by causing diminution of uterine contractions or by influencing this unknown secondary factor. One may thus regard the contractions as the precipitating and some other (endocrine, circulatory, or psychic) factor as the predisposing cause of dysmenorrhea.

4. No one explanation can be applied to all cases of dysmenorrhea. Any of the factors mentioned may play a part, and all must be envisaged in the management of such patients.

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Tuberculosis Abstracts

PRESENT-DAY USAGE OF PNEUMOTHORAX IN THE TREATMENT OF PULMONARY TUBERCULOSIS

The patient with tuberculosis must cure himself and the final conquest of the tubercle bacilli is a victory of the body itself. Physicians guide and assist the forces of the body to resist the multiplication and spread of the invading germs. Rest and good nutrition remain basic in the treatment. The ideal cure of any disease is to eradicate it with the least resulting loss of function of the involved tissue or organ. Surgical measures involving resection of parts and permanent loss of function represent defeat of medicine. This is not the fault of the surgeon but of the limitations of medical knowledge which allow the disease to reach a stage which demands the serious loss of function to win life.

Research for the cure of tuberculosis is and must remain the realm of prevention, of early diagnosis, and of specific bactericidal agents to check the progress of the disease. Yet, until those goals are achieved, surgical measures cannot be abandoned and efforts to improve them must continue.

Pneumothorax, as an active definitive treatment for pulmonary tuberculosis, has been widely used. The patient well chosen for his treatment is one whose tuberculous lesion will heal more quickly and surely when the lung is relaxed by the introduction of air in the pleural space. The selection may depend upon the patient himself — his race, color, temperament, and his ability or willingness to take rest. The lesion should be in considerable part an exudate one capable of being absorbed or of healing with minimal scar. Any cavity present (and usually cavitation is demonstrable by x-ray studies) should be one which will permit of closure by relaxation of the surrounding lung tissue. Tubercle bacilli in the sputum is evidence of necrosis and ulceration, even though no cavity is observed on x-ray films. In the area to be collapsed, there must be no evidence of bronchial obstruction which cannot be relieved. The siginificance of bronchial lesions in the area as well as the method of dealing with the thin-walled cavity which indicates bronchial obstruction has changed since the advent of streptomycin and other new drugs. Bed rest for three months to study the ability of the body to cope with the lesion should be tried before pneumothorax is undertaken, unless circumstances develop which indicate unequivocally that bed rest alone is inadequate. For each patient it must be decided whether or not streptomycin or other drugs shall be added to bed rest in this period. At the end of three months of observation and treatment, all findings must be reviewed to determine whether or not the healing process is adequate. By withholding pneumothorax in cases in which there are toxic manifestations the incidence of empyema in connection with the procedure has been greatly reduced. Streptomycin and other new drugs have reduced the time necessary to overcome toxic manifestations. Results of pneumothorax for Negroes are not as good as for white patients. The hazards are greater as they are for patients with diabetes. The judicious use of insulin and streptomycin in the latter group makes the procedure safer and more effective.

The effectiveness of pneumothorax in a case can sometimes be quickly determined by x-ray studies. If the lung is completely surrounded by air, with no pleural adhesions and with evidence of cavity closure, good results seem probable. If there are broad adhesions preventing relaxation of tissue or cavity closure, the procedure is not likely to be effective. Between these limits are all gradations of conditions. Each patient must be studied individually, perhaps with thoracoscopic observations. The procedure can always be modified or stopped.

Fluid in the pleural space during pneumothorax treatments creates a difficult problem. It is agreed that fluid persisting for weeks, increasing in amount or becoming turbid or bloody, or giving rise to toxic signs, or showing evidence of pyogenic nature, calls for termination of pneumothorax. The transitory presence of fluid after certain procedures, such as pneumonolysis, must be taken into consideration.

At times, circumstances compel continuance of pneumothorax in cases in which it is not fully satisfactory — cases in which bed rest has proved to be inadequate. The cavity may remain open and the sputum positive for tubercle bacilli. A cavity in the lung is not feared simply as an anatomic hole, but because it offers an environment — extra moisture, extra oxygen, less blood supply, less movement — in which the tubercle bacilli can live and multiply. From this focus, there are open bronchial avenues of spread within the lungs and elsewhere to trachea, larynx, mouth cavity, stomach, and intestines. A sterilized cavity can harm only by reducing function by loss of tissue. No effort should be spared in search for methods and means to sterilize permanent cavities.

The time for voluntary termination of pneumothorax is often discussed and variously answered. Often the answer is dictated by events. The lung gradually expands, the normal part first, then the involved part, until the pneumothorax space becomes so small that the treatment must be stopped. It is to be hoped that this process will be orderly and delayed until the lesion has become inactive, the cavity closed, and the sputum negative for tubercl bacilli. This may take from one to three years in the best of circumstances. If pneumothorax is continued too long, the lung may become incom-

(Continued on page 375)

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Manuscripts should by typewritten, double-spaced, and the original, not the carbon, submitted.

Reprints should be ordered from the printer, The Huse Publishing Co., Norfolk, Nebraska.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

Vol. 36 November No. 11

THE A.M.A. TWELVE POINT PROGRAM

1. Creation of a Federal Department of Health of Cabinet status with a Secretary who is a Doctor of Medicine.
2. Promotion of medical research through a National Science Foundation with grants to private institutions which have facilities and personnel sufficient to carry on qualified research.
3. Further development and wider coverage by voluntary hospital and medical care plans to meet the costs of illness, with extension as rapidly as possible into rural areas.
4. Establishment in each state of a medical care authority to receive and administer funds with proper representation of medical and consumer interest.
5. Encouragement of prompt development of diagnostic facilities, health centers and hospital services, locally originated, for rural and other areas.
6. Establishment of local public health units and services.
7. The development of a program of mental hygiene with aid to mental hygiene clinics in suitable areas.
8. Health education programs administered through suitable state and local health and medical agencies to inform the people of the available facilities and of their own responsibilities in health care.
9. Provision of facilities for care and rehabilitation of the aged and those with chronic disease and various other groups not covered by existing proposals.
10. Integration of veterans' medical care and hospital facilities with other medical care and hospital programs and with the maintenance of high standards of medical care.
11. Greater emphasis on the program of industrial medicine.
12. Adequate support with funds free from political control, domination and regulation of the medical, dental and nursing schools and other institutions necessary for the training of specialized personnel required in the provision and distribution of medical care.

Organization Section

NATIONAL DIABETES WEEK

The 1951 diabetes detection drive will be held in Nebraska during the week November 11-17, in conjunction with the annual National Diabetes Week sponsored yearly by the American Diabetes Association. Nebraska's program is again being sponsored by the medical profession, through the Diabetes Committee of the Nebraska State Medical Association.

This year's campaign will be conducted much the same as last year's, which was acclaimed nationally as one of the finest carried on in any of the states. Your Diabetes Committee, headed by Dr. Morris Margolin of Omaha, is striving for an even larger measure of success than in 1950. The success or failure of the detection program depends upon the cooperation of all physicians.

In 1950 the House of Delegates of the state medical association adopted a recommendation from your Diabetes Committee that individual physicians give free diabetes tests during National Diabetes Week to all patients who came to their offices. The cooperation of doctors was excellent last year. Two hundred and fifty returned questionnaires. These showed that 8,619 free tests were given, resulting in the discovery of 92 positives.

Your committee is again requesting that all members of the Association enter into the detection program wholeheartedly by giving patients free urine checks during the week, November 11-17. The primary purpose of the special week is to find the state's unknown, untreated diabetic patients. Besides being a sound clinical approach to the problem, free testing has also shown to have a marvelous public relations value to the medical profession generally. These two elements make your participation in the program worthwhile.

You have recently received a special bulletin, with campaign literature, poster and questionnaire enclosed. All of this is intended to help you make Nebraska's detection program one of the foremost in the nation. The committee asks that you please return the questionnaire immediately after the detection week closes. This questionnaire is essential to the statistical reporting required of such a program. Your cooperation in all aspects of the program will result in fine rewards for the profession as a whole.

NURSING SCHOOL SUBSIDIES

A bill providing for federal aid to nursing education has been introduced in Congress. In purpose, the bill is very similar to the one which would give federal subsidies to the nation's medical schools.

The new nursing bill, H.R. 910, would give federal aid to nursing education in four different categories:

1. Annual payments to schools of instruction.
2. Grants for construction and equipment of new schools or expansion of existing schools.
3. Scholarships.
4. Grants for special projects and recruitment.

During testimony before the House Interstate and Foreign Commerce Committee, both proponents and opponents agreed that (1) there is a shortage of nursing services (opinion varied on degree), (2) nursing schools are short of instructors, and (3) a proviso should be written into the bill for court appeal in case funds are withheld by the government.

Several persons appeared in favor of the bill, including Dr. Leonard A. Schelle, Surgeon General of the Public Health Service, who would have tremendous authority in its administration. Dr. Walter B. Martin, member of the A.M.A. Board of Trustees, opposed many phases of the measure. He stated that the A.M.A. objects to intrusion of the federal government and its agents into fields of education "whether it be general education, medical education or nursing education." He added that it would be difficult or impossible to end federal subsidies once nursing education became dependent upon them.

Dr. Martin proposed the following points in lieu of H.R. 910:

1. One-time construction grants on matching basis, based on formula similar to Hill-Burton hospital construction program.
2. A grant of federal funds to Committee on Careers in Nursing or some comparable private agency to help nursing recruitment program.
3. A temporary grant-in-aid program, not exceeding five years, of scholarships for advanced nursing education, administered by states.

Dr. Martin also objected to the unlimited administrative power of the Surgeon General who serves under the Federal Security Administrator. The Surgeon General would have an advisory council which is appointed by him with the approval of the Federal Security Administrator. Dr. Martin said he frankly doubted the "independence" of a council so constituted.

Another interesting point brought out by the A.M.A. Trustee was that there is a shortage of nursing services but not an actual shortage of nurses. He said there are some 200,000 graduate nurses out of 500,000 who are not now practicing. These, he asserted, could be counted on in an emergency.

NOVEMBER CRIPPLED CHILDREN'S CLINICS

November 10—Scottsbluff, St. Mary's Hospital, Fritz Teal and Michael Crofoot.

November 24 — Norfolk, Norfolk State Hospital, W. R. Hamsa or L. S. Campbell and Charles Tompkins.

Conferees of House and Senate October 3 reached a compromise between House and Senate action regarding the release of military reserve personnel involuntarily recalled. The House would have released all reserves who had seen as much as a year's duty in World War II after serving for twelve months during the Korean campaign. The Senate refused to change the present law calling for release of reserves after seventeen months service. Conferees agreed to permit the present seventeen month provision to remain in effect for officers (including physicians) and for enlisted men reduced the seventeen month provision to sixteen months.

CAREER OUTLOOK IN MEDICINE CALLED 'EXCELLENT'

A new edition of the Occupational Outlook Handbook, prepared by Labor Department and Veterans Administration, continues to report "excellent opportunities" in medicine "for those able to gain admission to medical school." The handbook is used in career guidance of veterans and others. About a medical career, it adds: "Demand for medical care will probably continue to rise in the future. Among factors which will tend to increase the demand for physician's services are the increase in population (particularly, the number of older persons); government provision of medical care for veterans and for members of the Armed Forces and their families; and the planned large-scale program for construction of hospitals in areas which have no modern facilities . . . (also) the general trend toward higher standards of medical care and public health."

CALL FOR PAPERS

Anyone wishing to read a paper at the Annual Session May 12, 13, 14 and 15, 1952, should get your name and title to R. B. Adams, M.D., 1315 Sharp Building, Lincoln 8, Nebraska. No requests will be accepted after February 1, 1952.

BLOOD PRODUCTION FOR THE ARMED FORCES AND CIVILIAN HOSPITALS

The Department of Defense has recently requested the American Red Cross to procure 2,800,000 pints of blood for defense purposes between July 1, 1951 and July 1, 1952. The Omaha Regional Blood Center has been assigned a military quota of 30,000 pints. The estimated requirement for civilian hospitals in this area is another 36,000 pints.

In order to meet the military quota it will be necessary for the Regional Blood Center to ship to the Armed Forces a very large portion of the blood collected from volunteer blood donors. Consequently physicians are asked to assist in meeting these blood needs by urging friends and relatives of patients to donate either at the Regional Blood Center or at Bloodmobile operations in surrounding counties.

Experience has shown that over-all blood production at the Center is greatest when physicians observe the following principles in their recruitment efforts:

1. The physician should personally suggest that friends and relatives of patients contact their local Red Cross Chapter immediately for an appointment when there is a possibility of a blood transfusion being necessary.

2. Donors residing in or around Omaha should be requested to call the Red Cross Blood Center, AT 2723, for an appointment. Those patients residing in surrounding communities should be requested to call their local Red Cross Chapter for an appointment to donate at the next bloodmobile visit in their community. (One of the reasons people in surrounding communities donate at bloodmobile operations is to eliminate the necessity for transportation of donors over long distances at the time of hospitalization).

3. Physicians should avoid threatening a charge for blood. (In some communities over 100 pints of blood have been lost in a single visit as a result of a threatened charge for blood).

4. Incentive for donating blood to the Red Cross Blood Bank:

(a) The responsibility of each healthy individual to assist in supplying the blood and plasma needs of the Armed Forces and of Civil Defense.

(b) The responsibility of each healthy individual to assist in maintaining a constant supply of blood and plasma immediately available for transfusion purposes in civilian hospitals.

To assist physicians in Omaha and Council Bluffs in their efforts to obtain donors, the Regional Blood Center has prepared 3x5-inch cards which read as follows:

> "To Patients Residing in Omaha and Council Bluffs: In anticipation of the treatment of------------------------------, Room No.---------, kindly have--------blood donors report to the Omaha Regional Blood Center, 2549 Farnam Street between the hours of 1 to 7 p.m. on Mondays and Wednesdays and 11 a.m. to 5 p.m. on Fridays. Donors should not eat any fatty foods on the day of donation. They should call AT 2723 for an appointment and should bring this card with them to the Blood Center.
>
> ------------------------------, M.D."

These cards will be sent to hospitals in Omaha and Council Bluffs for distribution to the various departments which use blood. Additional cards will be supplied by the blood center upon request.

It is suggested that all prospective fathers be urged to make an appointment to donate blood in anticipation of possible need at the time of delivery.

The whole-hearted cooperation of physicians is requested in order that blood production may be maintained at an adequate level to meet both military and civilian blood requirements.

News and Views

Creighton University School of Medicine will share in the 238 grants announced by the U. S. Public Health Service, for research into heart disease. They total $3,038,418.

C. M. Wilhelmj, of the Department of Experimental Medicine, was awarded a grant totaling $10,000.

The centenary of the birth of Major Walter Reed was marked throughout the country September 13 in observances recalling the great physician's successful struggle to determine the mode of transmission of yellow fever. On the same day the showplace of American military medicine and research, formerly known as the Army Medical Center, Washington, D.C., was officially renamed the Walter Reed Army Medical Center.

The Medical and Chirurgical Society of Maryland will publish a monthly state medical journal beginning January, 1952. It will be known as the Maryland Medical Journal and will serve as the official organ of the state society.

The following item is from the Fremont Guide-Tribune:

A doctor's fund, being developed by unsolicited contributions from residents in the Snyder area, has reached a total of $1,944, just $56 short of the goal set by the volunteer fire department which is promoting the fund.

Because the town is without the services of a doctor or ambulance, firemen contributed $1,000 to start the fund which they hope will be used to help some young doctor set up a practice at Snyder.

The fund is not to be a gift but will be made available, interest free, to assist the doctor to equip his office. There is suitable space for an office and living quarters which the townsmen will provide rent free if necessary.

And this from the Nebraska Farmer, Lincoln:

The community of Arcadia, Nebraska, wants a doctor! In fact, they want a doctor so badly that they have raised $24,500 and have built a new health center for the needed doctor.

A bond issue of $11,500 was voted several years ago, and recently with the realization that medical care was really a major problem, a retired farmer, Morris Fowler, took things in hand and raised

$13,500 in one week by popular subscription. That's how bad Arcadia's citizens want a physician. Here lies true community spirit and cooperation.

Dr. Douglas H. Stanton, former executive secretary of the Nebraska Council on Children and Youth, has been named assistant to the acting state health director, Dr. E. A. Rogers.

The Adams County Medical Society, in cooperation with the Mary Lanning Memorial Hospital, has arranged a plan to care for medical emergencies in which there is difficulty in obtaining services of a doctor.

The plan is especially for those individuals who are unable to reach their own doctor, or one of their choice, after 8 o'clock in the evening on week days and after 3 o'clock in the afternoon on Sunday, a representative of the medical society said.

The services may be obtained through a call to the hospital which in turn will summon the doctor on duty during the period and inform him of the existing emergency.

Dr. O. J. Vallicott, 84, died suddenly at the home of a son Dayton Vallicott, in Lincoln, following a heart attack.

A former practicing physician in Wood River, Dr. Vallicott in recent years had practiced medicine at Keensburg, Colo. At the time he was stricken he was on his way home from a trip to the west coast.

ACADEMY OF GENERAL PRACTICE

In line with the effort to reduce the number of medical meetings, the Omaha District Chapter will hold four scientific meetings a year. All members of the state chapter are invited to attend these meetings.

The next meeting will be held November 15th with election of officers in addition to the regular scientific program.

The Nebraska Chapter will have no scientific meeting this fall due to conflicting dates of other meetings and the shortage of available speakers who have resumed teaching responsibilities. A one day meeting will be held in Omaha in April.

The following new members have been elected to the state chapter:

Jerome E. Bleicher, Omaha; Donald O. Craig, Winside; Joseph F. Lucas, Omaha; James I. Podlesak, Lincoln; Forrest I. Rose, Lincoln; Charles T. Streeter, Lincoln, and James M. Woodard, Aurora.

The Woman's Auxiliary

The Executive Board of the Nebraska State Medical Auxiliary met for an all day meeting at the Cornhusker Hotel in Lincoln on September 7, 1951. Mrs. B. R. Bancroft, President, presided; committee reports were given, and plans formulated for the coming year. Mrs. Bancroft gave each board member a copy of the excellent handbook which she has written "The Institute of the American Way." If any county presidents have not received one, please contact Mrs. Bancroft.

The Secretary of the State Auxiliary, Mrs. John Anderson, read the report of the annual meeting in May, 1951, in Omaha. Mrs. H. O. Bell read the State Treasurer's report and Mrs. George Salter gave a report on the A.M.A. Auxiliary meeting in Atlantic City.

The Lancaster County Auxiliary met for the first fall meeting at Lincoln General Nurses' Home on October 1st. Mrs. Lynn Sharrar presided at the business meeting which followed the usual coffee-sandwich luncheon. Mrs. B. R. Bancroft spoke to us on her plans for the year and Mrs. George Covey gave a report on the Atlantic City session. About sixty attended.

Twelve members and three guests of the Adams County Medical Auxiliary had dinner with members of the Medical Society Wednesday evening, October 3rd, at the Hastings State Hospital. The dining room was festive with Halloween decorations and the chrysanthemum-centered table.

Mrs. Carl Gouldman presided at the business session, during which Mrs. G. E. McGlothlen of Harvard was elected vice president to succeed Mrs. Milton Anderson, who has moved from Hastings.

Guests included Mrs. C. W. Landgraf, formerly of Norfolk, and Mrs. I. Mangulis, a native of Latvia, whose husbands have joined the medical staff of the state hospital.

The Woman's auxiliary to the Omaha-Douglas County Medical Society sponsored a membership tea on Tuesday, October 9th. The meeting was held at the home of Mrs. Frank R. Barta with Mrs. B. R. Bancroft as speaker. Mrs. H. H. Doolittle gave several piano selections.

The Woman's Auxiliary to the Sixth Councilor District of the Medical Association met at the McCloud hotel for dinner Monday, October 1, with fifteen present. The evening was spent visiting and Mrs. Donald Steenberg, Aurora, spoke in behalf of Community Concert. Mrs. H. O. Bell is president of the auxiliary.

NURSES GUESTS AT AUXILIARY TEA

Members of the Tri-County Medical auxiliary entertained with a tea at the home of Mrs. Earle G. Johnson in Grand Island. Guests number 75 included graduate and student nurses from the St. Francis, Lutheran, and Veterans' Administration hospitals, and wives of staff doctors at the Veterans hospital and the Soldiers Home.

In the receiving line to greet the guests were Mrs. George DeMay, auxiliary president; Mrs. B. R. Bancroft, Kearney, state auxiliary president; Mrs. E. E. Farnsworth, and Mrs. A. D. Brown, Central City.

Gladioli decorated the serving table at which Mrs. J. G. Woodin, Mrs. J. E. Gelow, Mrs. K. F. McDermott, and Mrs. W. J. Arrasmith assisted. Mrs. Harvey Anderson was in charge of arrangements.

After a business session conducted by Mrs. DeMay, Mrs. Bancroft spoke on the auxiliary's project—the recruitment of new students to the nursing profession.

Nebraska State Department Of Health

NEWS NOTES

The Nebraska Public Health Association Convention met in Hastings, Nebraska, October 5 and 6, 1951.

The general sessions were held in the City Auditorium and the section meetings were held in the Clarke Hotel and the new Mental Health Clinic.

Seven sections held special meetings, with national and local people taking part in the discussions. The sections covered: Safety, Laboratory, Mental Health, Vital Statistics, Medical Social Work, School Health and Health Education, and Sanitation.

Many professional and community leaders interested in public health attended these meetings.

Dr. Martha M. Eliot made the following statements on assuming office as Chief of the Children's Bureau:

I want to see how fast and how far we can get in these directions:

1. Let us take vigorous steps to decrease the number of prematurely born infants and to save many more of those who are prematurely born. This is the biggest front remaining in the battle to help all our babies live safely through their first year of life. It means better maternal care, as well as better infant care.

2. We must make sure that each mother not only comes through the maternity period alive, but with abounding health for herself and her child.

3. I hope we can wipe out the "black market" in babies. We know what good adoption laws and practices are, and we have demonstrated how effectively they can protect the rights of the child, his natural parents, and his adoptive parents. Let's get them operating and used everywhere.

4. We must tackle the problem of preventing all kinds of congenital defects, find ways of preventing them, and improve our techniques in helping children to overcome the handicaps that cannot be prevented. This calls for more research and for spreading knowledge about preventives that we already have. No "blue" baby should go without surgical care if it will help him.

5. Let us step up our work for children with epilepsy and other chronic conditions. With the new diagnostic and treatment practices we have right now for epilepsy, we could enable 80 percent of children with epilepsy to lead normal, useful lives if we were to make sure that everyone got the proper treatment and care.

6. We must determine to do a great deal more for the many thousands of children who do not hear or see well. Ways and means are known. They call for combined action of parents, doctors, teachers, psychologists, and social workers. We need hearing and speech centers accessible everywhere to children with impaired hearing.

7. We must get a great deal more skilled help to children before they get into trouble with society. This means building up our social and health services for children in their own homes and communities. We already know much about the emotional problems which lead many children along the road to juvenile courts. It is time we applied this knowledge to prevent juvenile delinquency.

8. Let us wipe out every trace of brutal, degrading, and harsh treatment of youngsters in our training schools, and substitute informed and intelligent handling of these children so that they are helped to fit into society instead of fighting it all their lives.

9. Let us see how many parents, doctors, nurses, social workers, teachers, and other children's workers can be helped to understand what is known about the emotional and social development of children, so that they can put this knowledge into their everyday dealings with parents and with children. We should start on this job in the doctor's office; in maternity and child health clinics; in nursery schools and day nurseries.

The most important task to be undertaken in the decade ahead is to spread to all parents and to all people working with children an understanding of how and why a warm, close, parent-child relationship in infancy and childhood can give a child the sense of security he needs for insulation against his own feelings of frustration and his desires for uncontrolled aggression.

URGE LABELING DANGEROUS NATURE OF PLASTIC CEMENT

Labels on bottles containing ethylene dichloride, a commonly used chemical solvent of plastics, should contain a warning of its deadliness, according to an article in the August 4 Journal of the American Medical Association.

The chemical is used as a plastic cement by hobbyists as well as in industry.

Because of the habit of children swallowing unknown liquids when they are readily available, its poisonous nature should be indicated on containers, in the opinion of Drs. H. B. Lochhead and Henry P. Close of Coatesville, Pa.

They described the death of a mental patient in the Veterans Administration Hospital there. The patient obtained a bottle of plastic cement in the occupational therapy shop of the hospital and drank it. Despite intensive emergency treatment, he died in about 10 hours.

✦ Facts About the Blue Shield Plan ✦
and
Why Every Doctor Should Be a Participating Physician

The Blue Shield Plan is the medical profession's own program of prepaid medical service. It was organized under sponsorship of the Nebraska State Medical Association to enable the people of Nebraska to prepay the major expenses of medical care.

•

Under the guidance of leading members of the medical profession, the Blue Shield operates in the public interest as a non-profit organization. It is administered on a sound financial basis, in accordance with proven actuarial principles.

•

All physicians who are members of the Plan's Board of Directors serve without remuneration of any kind. They maintain close liaison with the Prepayment Medical Care Committee of the Nebraska State Medical Association and act upon the advice and recommendations of this committee.

•

The Blue Shield membership agreement and the Schedule of Benefits have been formulated upon the advice of the medical profession and are approved by the State Department of Insurance. The Plan has the approval of the Blue Shield Commission and it carries the Seal of Acceptance of the American Medical Association.

Blue Shield's not-for-profit operation enables the Plan to provide the maximum coverage consistent with income. Members receive the greatest possible return, in benefits, for the dues they pay.

By signing as Participating Physicians, doctors give positive evidence that they are supporting their profession's national effort to meet the public need for a sound program of prepaid medical service.

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More than 1,150 Nebraska physicians (about 93 per cent) have signed the Participating Physicians' agreement, accepting the amounts listed in the Blue Shield Schedule of Benefits as full payment for the services they render to patients in the lower and middle income groups. By providing these "service benefits," they make good medical care available to many people who would otherwise be unable to pay for the services they need.

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The active support given the Blue Shield Plan by the Participating Physicians has contributed greatly to its progress and success. With the understanding and cooperation of all physicians, it will continue to expand, extending greater service to more physicians and their patients.

Societies

Secretaries of county and district societies are requested to send in the minutes of their meetings to The Editor, Mezzanine No. 3, Medical Arts Building, Omaha.

The Seventh Councilor District Medical Society met at Superior on October 4th, with eighteen doctors and their wives present. After a dinner at the Hotel Dudley, Drs. A. L. Smith, Sr. and Jr., of Lincoln gave interesting talks on heart disease.

Dr. H. V. Nuss, Sutton, was elected president for the ensuing year.

Dr. R. E. Karrer of York is the new president of the Sixth Councilor District Medical association.

He was elected at a meeting held Monday night, September 10 at the McCloud hotel.

Dr. Don Steenberg of Aurora, president of the Association, was in charge of the evening's program.

Papers by three members of the Lincoln clinic high-lighted the monthly meeting of the Six County Medical association Thursday evening, October 4, at West Point Memorial hospital.

Members of the Five County Medical association were guests at the meeting and at the banquet held earlier in the cafeteria of the hospital.

About 50 doctors in addition to nuns and graduates of the nursing staff were present.

Dr. Bowen E. Taylor talked on "Coronary Occlusion," a form of heart disease; Dr. E. B. Reed discussed "Differential Diagnosis of Obstructive Jaundice;" and Dr. H. D. Hilton talked on "Surgical Treatment of Peptic Ulcers."

The Dawson County Medical Society and its Auxiliary met for a dinner meeting at the Dixie Inn in Cozad Monday evening, Oct. 1st.

Dr. Dean McGee of Lexington presided. The speakers were Dr. Frank Stone, orthopedist, of Omaha, and Dr. Pfuening, public health specialist, of Lincoln.

The Auxiliary then met at the home of Mrs. Charles Hranac. Mrs. B. W. Pyle, Gothenburg, presided. Speaker was Mrs. Berten Bancroft of Kearney, president of the Women's Auxiliary of the Nebraska Medical Society.

Attending from Gothenburg were Dr. and Mrs. B. W. Pyle and Dr. M. J. Ayres.

The Nebraska Chapter of the American Physical Therapy Association held its September meeting at the Orthopedic Hospital in Lincoln.

Treating the Cerebral Palsy Child was Dr. Fritz Teal's topic of discussion. His inspirational talk was demonstrated with patients showing the different types of casts and braces being used for corrective measures and training. He emphasized the

LIBRARY OF THE
COLLEGE OF PHYSICIANS

"stance brace" for balance. It was his opinion that this promotes faster progress. While there are some phases of treatment common to the treating of the cerebral palsy child, each patient must be considered for his specific need in casting and bracing which is prescribed according to the type of palsy and extent of involvement.

A number of the Physician Therapists in Omaha attended the Institute on Poliomyelitis, bulbar type, which was recently conducted at the Children's Memorial Hospital.

The following is a list of the registered Physical Therapists new to the Nebraska region:

Miss Lucy Greteman, St. Joseph's Hospital Omaha,

Miss Margaret Golbraith, Children's Memorial Hospital, Omaha,

Miss Helen J. Steele, Children's Memorial Hospital, Omaha.

Mr. Wayne Paustian, Veteran's Hospital, Omaha.

Mr. Tom Journey, Lincoln General Hospital, Lincoln.

A meeting of the executive committee was held in Omaha, October 8. Plans for the winter program were discussed.

Deaths

A. E. Stuart, M.D., Cedar Bluffs. Born in 1862 in Canada. Graduated from Wayne University Medical School in 1885. Came to Nebraska in 1886 and located in Cedar Bluffs where he remained in practice until shortly before his death September 30, 1951. Throughout his active career Dr. Stuart showed an interest in professional, civic and political affairs. He served his district in every official capacity, being numerous times a delegate to the Nebraska State Medical Association. He was president of the local County Society. On the political level, he was county chairman of the Democratic party and attended every state convention of the party for more than 50 years. For a long time, until 4 years ago, he was county physician. In April, 1950, Cedar Bluffs held a celebration honoring Dr. Stuart. Surviving are his wife, a daughter, and several grandchildren.

John C. Wade, M.D., Oconto. Born in Iowa in 1870. Graduated from Sioux City College of Medicine. Located in Tipton, Iowa, immediately after graduation and in 1899 he came to Oconto where he remained in practice until a few months before his death September 27, 1951. Surviving is a brother, Dr. Arthur E. Wade of Seattle, Washington.

Dr. Paul L. Barnes, aged 43, of Phoenix, Arizona, former staff member of the Norfolk State Hospital (1939-1950), died Friday, August 31, 1951 of injuries received on August 25, 1951 in an automobile accident near Phoenix, in which two persons were instantly killed. Mrs. Barnes was also critically injured in the accident, but she is now recovering. Dr. Barnes is survived by his wife, Mary, three daughters, his parents, two sisters and one brother. Funeral services and burial were held for Dr. Barnes at Exeter, Nebraska, on September 11, 1951.

Dr. Barnes was born at Ainsworth, Nebraska, January 30, 1908. He received his schooling there. He was a graduate of Nebraska Wesleyan University, 1930; he graduated from Creighton University, College of Medicine in 1938.

Human Interest Tales

Communications bearing human appeal are solicited. They should be addressed to The Editor, Nebraska State Medical Journal, 111 So. 39th, Omaha.

Dr. Roy D. Sinclair left Chadron to practice in Salmon, Idaho.

Dr. W. R. Miller has returned to Sterling after a year's absence.

Dr. Edward T. Gerin, formerly of Omaha, has located in O'Neill.

Back to his work after an illness is Dr. R. A. McLellan of Curtis.

Dr. Richard E. Klaas, formerly of North Platte, has located in Osceola.

Our condolences to Dr. Joseph D. McCarthy of Omaha on the loss of his wife.

Stationed at Langley AFB at Denver, Colorado, is Dr. H. J. Albers, formerly of Clarkson, Nebr.

Dr. A. E. Mailliard marked the 25th anniversary of his medical practice in Osmond in September.

Dr. R. L. Cassel of Fairbury participated in a panel discussion at the Diller PTA program in October.

"Mental Illness" was the topic discussed by Dr. G. E. Charlton of Norfolk, before the junior Hi-Y club.

Taking graduate work at the University of Minnesota in Minneapolis is Dr. A. E. Hildinger of Gretna.

Dr. C. C. Copeland was honored by residents of Beaver City for his 47 years of service to the community.

Dr. J. Rudolph Schenken of Omaha was one of the guest speakers at the Kansas City Southwest Clinic in October.

Elected president of the medical staff at the Mary Lanning Memorial Hospital was Dr. O. A. Kostal of Hastings.

Bridgeport has a new physician. Dr. George P. Post replaced Dr. Bryon Petersen who enlisted in the U.S. air force.

A native son of Spalding, Dr. Robert J. Fox, has returned there. He will be associated with Dr. M. M. Sullivan.

Dr. and Mrs. Herman Johnson of Omaha have returned after a stay at Lazy-J-Bar Ranch near Grandby, Colorado.

Dr. Arthur Greene of Omaha addressed the Tri-County Medical Association at their last dinner meeting in Fremont.

Dr. D. E. Baca of Papillion was received as an associate member of the International College of Surgeons in September.

Dr. L. L. Maher, a graduate of Creighton University, has taken over the practice of Dr. George W. Dean in South Sioux City.

Honored by members of the community was Dr. J. Y. Racines, commemorating his services in Palmer for the past 25 years.

Dr. W. Max Gentry of Gering returned from a two week trip to Chicago, where he attended a post graduate course in internal medicine.

Attending the Cook county graduate school of medicine in Chicago, taking additional work in surgery, is Dr. Ivan M. French of Wahoo.

Dr. John Barmore of Springview following military service in Japan since 1949, was recently discharged from the army with the rank of major.

Attending the National Convention of the Ambulatory Fracture Association in San Bernardino, California, was Dr. F. Wayne Brewster of Holdrege.

Dr. Olga Stastny of Omaha retired as medical director of the Supreme Forest Woodmen Circle. Dr. Nancy Catania, also of Omaha, will succeed Dr. Stastny.

Dr. George Alex Young, Jr., of Omaha spoke on the artist's unconscious motivations in planning a painting at the meeting of the Associated Artists of Omaha.

New staff officers of Our Lady of Lourdes hospital are Dr. George Salter, president; Dr. E. L. Brush, vice president, and Dr. Earl Slaughter, secretary, all of Norfolk.

Leaving Bloomfield after sixteen years of practice, for Erie, Pennsylvania, is Dr. M. H. Carrig, who has accepted a position as physician for the General Electric Company.

Dr. L. F. Valentine, who recently returned from the International College of Surgeons meeting in Chicago, addressed the Nebraska State Nurses association at their meeting in October.

Dr. and Mrs. Rudolph Decker of Byron spent two weeks in Michigan, Illinois and Iowa during the latter part of September visiting relatives and celebrating their 35th wedding anniversary.

"Education of Doctors in Medicine" was the topic discussed by Dr. Harold C. Lueth, Dean of the University of Nebraska College of Medicine, before the Professional Men's Club, in September.

Dr. J. A. Lanspa of Tecumseh attended a week's study in surgery at the International College of Surgery at Chicago, and is now enrolled in a postgraduate course in surgery at the University of California at Berkeley.

TUBERCULOSIS ABSTRACTS

(Continued from page 367)

pletely expansible. This can best be avoided by watching the ability of the lung to expand and contract and the thickness of the visceral pleura. The patient's willingness, ability, and opportunity to carry on with extra rest and physical limitations must be weighed in the final decision.

Among physicians treating tuberculosis there is uniform agreement that pregnancy in a patient with active pulmonary tuberculosis in whom the disease is well controlled offers no serious hazard to life or to the expectancy for recovery. If the disease is not controlled, then pregnancy is a definite hazard to recovery and to life. Some form of collapse therapy may then be necessary. Pneumothorax, if it can be effectively induced, then is the method of choice.

The treatment of pulmonary tuberculosis is not a skirmish, not a battle, not a siege, but a long-drawn-out war with activity on many fronts. Treatment must be based on strategic plans to suit the patient for years, perhaps for a lifetime. The plan must be to eradicate the infection while preserving at a maximum the function of the diseased part. Extension of the disease and complications in parts of the body must be dealt with quickly. Pneumothorax is the most flexible and versatile method of collapse therapy because it can be lessened, enlarged, shifted from side to side, applied to both sides, combined with any other form of treatment—rest, drug, antimicrobic, or surgical—or stopped at will. A treatment with such long and widespread effective usage, the value and limitations of which have been determined, is one to be retained and used in combination with all other forms of treatment. As methods improve to prevent tuberculosis and to diagnose and treat it early when it does occur, progress toward the goal of minimum sacrifice of tissue or function will eventually reduce the need for the clumsy methods of collapse and resection. The last of these methods to be abandoned will be the flexible, versatile pneumothorax, narrowed it its application but effective to the last well-chosen case.

—John H. Skavlem, M.D., California Medicine, December. 1950.

THE SPECIFICITY OF THE TUBERCULIN REACTION

Few procedures employed in the campaign to eradicate tuberculosis have been of greater value than the tuberculin test. It has been useful in the diagnosis of tuberculosis in the patient and priceless in studying epidemiology and public health practices in tuberculosis control. It has been used to determine the incidence of development of tuberculosis infection in exposed groups, and studies of the tuberculin reaction in nurses have defined the limitations on its specificity and reliability with true tuberculous infection.

In modern medicine specific tests must be quantitative. The Mantoux tuberculin test supplies the quantitative aspect lacking in the earlier von Pirquet. The introduction of purified protein derivative (PPD) is a further refinement. Without a standard tuberculin, analysis of results on the specificity and stability of the tuberculin reaction would have little meaning.

The specificity of the tuberculin reaction has been called into question not a few times. Lumsden and his colleagues in 1939 failed to correlate tuberculin reactions and the calcifications of supposed primary tuberculosis in investigations in two areas. The later correlation of incidence of pulmonary calcification with reactions to histoplasmin and other evidence indicating that the calcifications in question are probably residues of histoplasmosis or other related infections has been a triumph of epidemiologis research. As a result, confidence in the specificity of the tuberculin reaction emerged to a higher level than ever before.

The problem of the relative specificity of low and high doses of tuberculin however is still unsolved. The correlation of strong reactions to weak doses of tuberculin with recent active or progressive tuberculous infection is clear. However, a correlation of weak reactions to strong doses of tuberculin with evidence of past or inactive tuberculous infection has been hard to establish. The assumption has been that allergic levels vary enormously and that high doses of tuberculin may be necessary to bring forth evidence of true tuberculous infection in persons natively sluggish in allergic response, or low in sensitivity because of a long lapse of time since the sensitizing infection.

Numerous facts support this assumption. Racial variations as well as variations in physiologic state, such as those caused by nontuberculous infections, pregnancy, hormonal influences, and nutritional factors are known to modify the intensity of the reaction. The fact that originally weak sensitivity tends to fade with time suggests that the vigorous reactions observed in intimate contacts of persons with open tuberculosis are the aftermath of a constant stimulation of sensitivity by repeated subclinical infections. Aronson noted a rise in sensitivity in persons vaccinated with BCG in contact with cases of tuberculosis. Finally, the low degree of sensitivity conferred by BCG is evidence that the microorganisms themselves are concerned in the individual's level of tuberculin sensitivity.

Thus, reasons are at hand to explain variability in sensitivity to tuberculin. But puzzles have remained. Among these are the weakness and inconstancy of tuberculin reaction in some persons known to be in occasional contact with tuberculous patients, and the frequency, in certain regions, of tuberculin reactions of low intensity in persons not believed to be in contact with tuberculosis.

A paper by Tukey, DuFour, and Seibert throws light on the first of these problems. Serial tuberculin tests in a large number of student nurses tested at three-month intervals in their training course revealed a small cumulative increase in the incidence of reactions to the first-strength test dose of PPD (0.00002 mg.), which might be attributed to true tuberculin infection, and also a fluctuation in sensitivity to the second dose (0.005 mg.), from negative to positive and again to negative, in many students who never re-acted to the first dose. The repeated injections themselves appeared to be ruled out as a cause of sensitivity. A recent analysis led the authors to conclude that these changes may be due to slight infections and gradual recovery.

However, another possibility remains open. In the same city, Teague and Placentra called attention to the fact that during the last 20 years studies with the standard tuberculin PPD in representative high schools have shown a steady and striking decline in the incidence of reaction to the first dose of PPD, but little drop in the incidence of reaction to the second dose. The drop in reaction to the first dose could be correlated with the decline in mortality from tuberculosis, but the persistence of sensitivity to the second dose may well be due to organisms other than the tubercle bacillus. This view recalls the problem of the "no visible lesion reactor" in cattle who are sometimes actually "skin lesion reactors" suffering from minor infections of the skin, apparently due to acid-fast bacteria of very low virulence occuring in soil and grass.

The suggestion that bacteria other than the tubercle bacillus may be responsible for nonspecific reactions to tuberculin in man has been made by others. An exhaustive analysis of a series of tuberculin reactions in nurses in many states, by C. E. Palmer and his associates, has shown extraordinary geographic variations in the pattern of reaction. They showed a significant correlation between tuberculosis mortality rates and frequency of reaction to the first dose of tuberculin. This was consistently higher in urban than in rural communities, which suggests that contact with other human beings is concerned. Reactions to the second dose in subjects failing to react to the first were not correlated with other evidence of tuberculous infection or with the frequency of reaction to the first dose of tuberculin. Within certain geographical areas, the level of second-dose sensitivity was remarkably uniform despite substantial variations in the percentages of first-dose reactions. These facts led the authors to the conjecture that an organism different from, but allergenically resembling, the tubercle bacillus is concerned. The geographic pattern and rural relationship suggested that a warm and moist climate and sub-tropical vegetation may be important. No one will disagree with the authors' suggestion that the "results of this study would appear to justify a serious search" to learn the [illegible] concerned.

Thus, two important possibilities in explanation of weak and fluctuating reactions to tuberculin remain. The first is that these reactions may be responses to intermittent slight infections with true tubercle bacilli. The loss of sensitivity in reactors exposed to tuberculosis after the contact is discontinued and the low level and not infrequent waning of sensitivity after BCG vaccination furnish strong evidence that this possibility is a real one.

The other explanation is infection by acid-fast microorganisms other than the tubercle bacillus. Evidence in favor of this is indirect, but suggestive. A direct attack on the problem is possible through experiments on sensitization of man by such baccili and investigation of low-sensitivity reactors for infestation with acid-fast baccilli that might be responsible for the reaction.

—Esmond R. Long, The American Review of Tuberculosis, March, 1951.

CHILDREN'S BUREAU RECOMMENDS TWO YEARS OF P. G. STUDY FOR WELFARE WORKERS

U. S. Children's Bureau recommends the equivalent of a master's degree for public child welfare workers, who according to an earlier Bureau survey, earn an average salary of $227 per month. In releasing results of a survey made in June 1950, the Bureau says such employes should have "two full years of study in a graduate school of social work in order to fulfill their social work functions." Generally, this is sufficient time to obtain at least a master's degree. The salary figures, based on the same survey, were made public by the Bureau April 25, 1951. The latest release has these additional facts on public child welfare workers: A majority are under 40 years of age and have had some graduate work but not necessarily in social work; almost 20 percent had two or more years of graduate study; 37 percent had 10 years or more experience, another 18.8 percent had five years and only 10 percent had less than one year's experience.

The Nebraska State Medical Journal

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

Vol. 36 Norfolk, Nebraska, December, 1951 No. 12

EDITORIAL

THE DOCTORS WILL MEET THEIR PLEDGE

The medical profession of the United States through its recognized official organization, the American Medical Association, has pledged one million dollars as its 1951 contribution for relief to medical schools in financial distress. This sum was to serve as a nucleus around which to enlist non-physician contributors. The objective was to procure a sum large enough to prevent some of the institutions from losing approval in the ranks of class A medical schools, through emergency "boosters" in their shrunken budgets. Many of the schools which have received checks from the Foundation acknowledge them as life saving stimuli to their teaching programs.

We wish we could report the campaign for the million dollar fund as having gone over the top. According to Dr. Louis Bauer, President of A.M.A. it is about one-third short of the goal. Dr. Bauer expressed concern over the fact that there were only two months left to fulfill the 1951 quota, and that checks are coming in at an embarrassingly slow rate. Most physicians we know apportion their voluntary contributions at the end, rather than at the beginning of the year. We predict therefore, that come the Christmas holidays the fund will be greater than originally planned. The physicians of America are not in the habit of falling short on their pledges. In this case too, most of us are conscious of the debt we owe to the institutions which gave us our training. Also, too many of us are alert to the necessity of maintaining the high grade of medical education attained by the medical schools of this country.

The physicians of America today more than ever before are appreciative of their freedom and dignity stemming from institutions which themselves are free and dignified. We are the only country left in the world with an educational system not entrapped in the tentacles of government paternalism. Above everything else we realize that to meet mounting costs of modern training our medical schools regardless of their source of income find themselves in dangerous need of additional funds. We know too that propaganda emanating from Washington to convince the American people that they are suffering from a shortage of physicians is one of the means whereby the bureaucrats hope to obtain control of medicine and medical practice by taking over the medical colleges.

The National Education Foundation must succeed. This Journal appeals to its readers to give full support by sending in their checks. We know they will not fail.

REGIONAL POST GRADUATE COURSES IN NEBRASKA

The physicians of Nebraska have much to be proud of. Few states with comparable populations can duplicate our facilities in medical education today. On the undergraduate level are two medical schools with excellent faculties training students to fill our ranks and work shoulder to shoulder in providing medical care to the people of our commonwealth. In the post-graduate field organized throughout the academic year in each of our institutions are facilities in the form of short refresher courses in the various subjects open to any practising physician in the state.

Our state association each spring brings a galaxy of speakers from outstanding Univer-

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sities, and in the fall for the past two decades the Omaha Mid-West Clinical Society has been bringing to Nebraska the highest caliber of medical talent available anywhere in the world.

For the first time in its history our association has undertaken a series of post-graduate courses manned by medical celebrities with the newest in medicine brought to the figurative door-step of the physician interested in the latest developments. And what physician today is not interested in medical progress?

Those responsible for this laudable innovation deserve our warmest gratitude. That these circuit courses will be well attended is a justifiably foregone conclusion.

THE MODERN COUNTRY DOCTOR

In Chicago recently a group of physicians and representatives of nearly a dozen states were studying the map and plotting a course for the human geography of medicine. Some of the states have for a decade and more been ingeniously setting attractive stages for doctors in small towns and rural areas, beckoning them away from cities which can spare them. The Committee on Medical Service of the American Medical Association, which is also planning for the even distribution of medical care, seeks to coordinate these local plans on a national scale.

What enterprising states have done forms an interesting prologue to the broadening drama on which the casting committee of the A.M.A. is working. In their small-town and rural theatres of medicine they have been industriously (and with the aid of the doctors themselves) building and painting sets to make the scene more attractive to young physicians.

A generation ago a physician might spend only about 30 per cent of his working time actually treating patients. Today the proportion of treatment-time is nearer 90 per cent of his working day. But to spend his time so productively as this requires hospital and clinic facilities close at hand. These are being drawn to the scale of need in the local community, and small hospitals and health centers form an essential part of the scene. The Hill-Burton Act with its federal grants-in-aid to states and local communities has helped to promote the program of voluntary medical planning.

Putting the right doctor in the right place is the key to the success of this plot, too. The young doctor who has completed his interneship (and perhaps his residency) is a good doctor. There are nothing but Class A medical colleges in the nation now. But to fit into the small town or county seat role he must be the spiritual kinsman of the old country doctor and possess a flair for people and for country life.

States that have placed doctors in small towns by the score in recent years told the A.M.A. committee how their plans were contrived. They offered the proof that the country doctor would return in modern dress if there were some appropriate retouching of the medical scenery.

—From The New York Times

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ORIGINAL ARTICLES

Massive Gastro-Intestinal Hemorrhage

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Massive hemorrhage from the gastro-intestinal tract is a serious complication that should never be treated lightly. The natural tendency of many hemorrhages to cease spontaneously does not lessen its seriousness. At times a mild hemorrhage develops into a more serious type so that constant vigilance for at least seventy-two hours is very important.

The important part of any form of treatment is to have a definite plan and to have constant team-work between the internist, the laboratory, and the surgeon. We must be systematic and individualize treatment for each case, because even though many cases may be similar in some respects they all vary so that no routine type of treatment can be employed.

The conservative treatment is the safe procedure even in cases over 45 years of age, because with proper care the majority respond very well. It is doubtful that over 5% of cases need to be operated early. The patient over forty-five years of age with a history of repeated hemorrhages, or the careless individual who does not adhere to his diet and other instructions should be operated. Occasionally an individual who does not respond readily to conservative measures and continues to bleed should be operated if the condition of the patient warrants it. Any suspicion of malignancy or potential malignancy should be operated. The type of operation is an individual problem, but the majority need a partial gastric resection.

The risk of the operation again depends largely upon the surgeon. Anyone not skilled in this type of surgery should never attempt it. A definite diagnosis and localization of the lesion is important in cases where surgery is indicated. An emergency may arise where surgery must be attempted at once as a life-saving measure. As stated previously, team work and individualization is the all-important factor.

Massive hemorrhage from the gastro-intestinal tract may come from any point from the naso-pharynx down to the anus. It likewise can come from a variety of causes, such as trauma, ulcerations in the naso-pharynx, esophageal varices, blood dyscrasias, malignancies, polyps, tumors, peptic ulcers, ulcerations, or tumors of various types in the small bowel or colon, terminal illness, and a variety of other causes too numerous to mention. In this paper we are chiefly interested in discussing massive hemorrhage from peptic ulcers which cause about 90% of massive hemorrhages from the gastro-intestinal tract.

It is well to establish a proper diagnosis and location of the hemorrhagic lesion unless shock is present, then do not delay, but treat the shock by transfusions, plasma, glucose, and saline solutions and all other measures required to combat shock.

In peptic ulcer cases a brief history may make the diagnosis. A dyspeptic history with food or alkali relief or hunger pains two hours after eating are often helpful. A previous history of an ulcer with past x-ray evidence is of value. It is true that a patient may have an old ulcer and yet the hemorrhage may be of different etiology, but this is remote.

The passing of tarry stools or fresh blood often gives the clue as to the location of the hemorrhage. Fresh blood usually comes from the lower part and tarry stools come from the upper part of the gastro-intestinal tract. If diarrhea accompanies the hemorrhage it may confuse the picture. A digital rectal examination can be rapidly made with little or no discomfort to the patient and it gives valuable information.

Ulcer pains rapidly disappear with massive hemorrhage. The personal habits of a patient are important: an alcoholic history may give rise to suspicion of esophageal varicese; jaundice, ascites, or caput medusae may indicate liver disease. Petechia, enlarged glands, or spleen, or the history of being a bleeder may point to some blood dyscrasia. The history of hypertension, lues, or tuberculosis is also of value.

The blood pressure and pulse rate are of extreme diagnostic importance. These simple examinations often give valuable information of impending shock. It is of great value if a patient knows what his normal pulse and pressure readings are, because many patients have variable normal values. Pallor, sweating, yawning, sighing respiration, thready pulse, systolic pressure below 100 are usually signs of impending shock. The hematocrit reading is of great significance. The blood count does not show the amount of blood lost, because it rarely stabilizes for 24 hours or more on account of plasma dilution. A rising blood count and an improved hematocrit reading are valuable guides to indicate cessation of hemorrhage.

Many laboratory procedures are of value, but we must not over-emphasize their worth. In well equipped hospitals, laboratory procedures present no problems, but often these facilities are not available. While the patient is being typed for a transfusion the following procedures may be carried out: complete blood count, prothrombin time, hematocrit reading, blood urea nitrogen, and urinalysis. Blood volume estimations are of value if proper interpretations are made. Liver function tests, especially bromsulphalein and cephalin flocculation tests are of value. Elderly people retain bromsulphalein, so careful evaluation is necessary here as in any test.

The prothrombin time gives valuable information regarding vitamin K deficiencies and it is likewise a good liver function test. Blood urea nitrogen tests tell us about kidney function and according to Bockus(1), is of great prognostic value. High urea nitrogen figures are a bad prognostic omen. The specific gravity of the urine also gives information of a renal function and fluid balance. Constantly low specific gravity with normal fluid intake speaks for pood kidney function. The liver, the kidneys, and adrenals are extremely important, and a lessened blood supply to these organs can be disastrous. The amount of urinary excretion should be carefully watched. Below 1,000 cc exretion on normal fluid intake is not desirous and an effort should be made to see that fluid balance is not disturbed. Transfusions, or hemorrhage, may produce oliguria which is always dangerous.

The Rh factor and careful cross-matching of blood is important, because transfusion reactions in these patients could be the breaking point in the outcome. Bleeding and coagulation time, red cell fragility, and capillary fragility are of importance, but a history of familial jaundice, hemolytic icterus, or the history of a true bleeder is of more value. CO_2 combining power, the blood chlorides, the serum protein, and albumin may help in determining the type of fluids to be used, but in giving transfusions these tests are often not needed. A test for occult blood in the stool is confusing, because the patient has usually stopped bleeding before the test is negative. If the occult blood test remains negative for several days, it is of some value.

Wiggers and his colleagues(2) and others have shown that following a large hemorrhage there is an initial stage of vasoconstriction which tends to compensate for the reduced blood volume and a corresponding reduction in the vascular bed which mobilizes the cells from certain depots, especially the spleen. If the hemorrhage ceases all is well, but if it continues this reflex mechanism becomes exhausted and shock ensues.

Clinical signs of rising blood pressure above 100 systolic and a slowing of the pulse rate with a general improvement of the patient is our best guide that the hemorrhage has ceased. If the blood pressure falls to 80 or below, watch the patient carefully for shock. Pressure readings should be taken at least every hour. A pulse rate over 110 per minute in a patient who is not nervous or apprehensive is also a danger signal. These patients must be transfused without delay.

If 500 cc of blood raises the pressure to 100 systolic and the pulse rate drops, it is safe to watch for further developments. If the pressure does not rise give another 500 cc of blood. Always insist on careful re-cross-matching with each 500 cc given. Each case is an individual problem as to the amount of blood needed. The blood volume must be kept up to proper levels when large amounts of blood have been lost. Care must be taken in giving the second 500 cc—give it slowly, not over 8 cc. per minute. Tocantins(3) gives a good rule to follow in the rate of giving transfusions. If the blood pressure is below 50 systolic, give 20 cc to 44 cc per minute. As the pressure rises to 70-80 mm of Hg., slow the rate of the transfusion to 10 cc-15 cc per minute. When the pressure is at 100 or more, do not give over 6 cc. per minute.

The danger of pulmonary edema is greater in giving large amounts of blood or fluids rapidly. We have given up to 3,000 cc of blood but are very cautious with larger amounts. Heart cases should be especially watched, because overloading the heart with large amounts of fluid is dangerous. Tocantins(4) calls attention to the fact that when blood or fluids are given one should watch for plethora. If the jugular veins stand out, or the appearance of the patient's face is bluish or congested, stop the transfusion. In anesthetized patients the jugulars are also a good guide for the amount or rate of fluids given. The character and rate of the pulse are also a good guide. A rapid, weak pulse is always a danger signal.

Glucose and saline solutions are rapidly excreted and diffuse into the tissue spaces rapidly; hence, they do not maintain blood volume or pressure well. If a patient is dehydrated badly, we usually give Hypodermoclysis with our transfusion. Solutions such as acacia or gelatine should be given with great caution. There are rare, if any indications for their use today. In giving large amounts of citrated blood it is often of benefit to give 10 cc to 25% solution of calcium gluconate to offset the anti-coagulant effect of the citrate solution. Sternal marrow transfusions may be used if no veins are available. Arterial transfusions are of value, but are rarely indicated.

A practical method of estimating blood loss in acute hemorrhage developed by Green and Methaney(5) is of value. It is based on cardiovascular response to tilting the body to an angle of plus 75 degrees for a period of 3 minutes. An increased pulse rate of less than 25 beats per minute indicates negligible blood loss. An increase of 30 beats or more above the supine rate indicates transfusion requirement of 1,000 cc blood. Development of syncope indicates need of 1,500 cc. Signs of shock in the supine position indicates a requirement of at least 2,000 cc of blood.

The recurrence of shock after a satisfactory rise of blood pressure and reduced pulse rate had been attained is not uncommon. Sudden drops in pressure and increased pulse rate are always more serious than a gradual change. Substernal pain, chills and fever, extreme apprehension, cyanosis are always signals to stop the transfusion at least temporarily.

Treatment will vary with each patient. Common sense in most cases is a good guide to the indications of individual measures needed in each case.

Intubation is used as a routine measure in some clinics, but we use it only when indicated. Blood is not an irritant in each patient and often the tube is an irritant far greater than the blood. The ulcer pains usually cease when hemorrhage occurs. Blood is high in protein content. It neutralizes acid and hence in most cases is of value and not a detriment. If nausea and vomiting continue, or diarrhea occurs, we sometimes intubate, but otherwise not. Large clots cannot be removed through a Levine tube. Large tube intubation in face of hemorrhage in our opinion is dangerous. Any tube may further damage the gastric mucosa and in cases with necrosis may lead to perforation.

We believe in early feeding in all cases of hemorrhage. It is safe to wait 24 hours in large hemorrhage, because the blood remains in the stomach for a variable time. We wish to lessen or slow peristalsis, because this favors the cessation of hemorrhage. Opiates are of value in some cases and in the treatment of shock we use them as indicated. Opiates occasionally induce vomiting, and therefore we use them cautiously. Sedatives as barbiturates by hypo are of great value, because they lessen apprehension and produce less nausea than opiates. As soon as feasible we give them by mouth.

The food should be high in protein content, easily digestible and nutritious. Rush(6) quotes Duncan and Waldrom that fats increase coagulation of blood to a marked degree, and this would be of decided benefit in cases of hemorrhage. It is best to give small quantities often rather than large feedings. We use a milk and cream mixture the same as in the treatment of any ulcer case. We increase the amount of character of the feeding as rapidly as the individual patient tolerates it. We aim to keep the diet adequate around 3,000 calories if possible. Ulcer treatment and feedings are the same in these cases as in any other type of ulcer.

Many clinics follow a strict Muelengracht regime or the Lenhartz milk mixture, but it is best to modify the diet according to the needs and tolerance of the patient. Protein hydrolysates may be used occasionally, but powdered milk in our hands is of greater value and better tolerated. Vitamins and orange juice are added as indicated. Vitamins B, K, and C are valuable adjuncts in the treatment of these cases and should not be neglected.

We do not advocate the use of alkalies unless indicated. They may disturb the acid-base balance. The aluminum gels are also only used as indicated. In cases with high acid curves and night pains, we do use whatever is needed to combat these disturbing symptoms. Belladonna and other anti-spasmodics are a decided help in some cases, but we prefer not to use them too early. Cathartics are never used. Oil enemas to be retained 2 hours, followed by a low enema after the hemorrhage has ceased, at least 48 hours, are preferable. Mineral oil or other lubricants are of value and are used as necessary. Bismuth subnitrate and like preparations have their place if peristalsis is too active. Some prefer not to use bismuth preparations, but clinically, in our hands, they have been of value.

Iron in the form of ferrous sulphate or any other ferrous salt is indicated when tolerated. Smoking and tobacco are to be avoided. All other medications are used as indicated. We believe in ambulation as early as possible when the hemorrhage has ceased.

We have shown that fresh and naturally formed clots in experimental dogs withstand full replacement of blood without any disturbances of the clot(7). The greatest blood pressure rise in the experimental dogs occurred chiefly after the first replacement of blood. The amount was equivalent to a pint of blood in humans. (Seven cubic centimeters per kilo.)

SUMMARY

1. Conservative treatment of massive gastro-intestinal hemorrhage is advocated.

2. Occasionally surgical intervention is needed.

3. Transfusions are indicated early and is the best method of combating massive gastro-intestinal hemorrhage.

4. Individualization in the treatment of each case is advocated.

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The Early Diagnosis of Carcinoma of the Cervix*

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INTRODUCTION

Almost every writer who has expressed his views on carcinoma of the cervix uteri has stressed the importance of early diagnosis of the disease through dissemination of information to both the layity and the medical profession There are very few statistics available in the literature as to the results of such educational programs for recent years.

Prior to 1944 the percentage of early cases of carcinoma of the cervix varied from 5 to 20 per cent for stage 1 and was about 30 per cent for stage 2. Hunt(7), Kimbrough(9), Richards(14), Schmitz(15), and Munnel and Brunschwig(13).

TABLE I

CARCINOMA OF CERVIX SURVEY, 1931-1941

		Stage I		Stage II		Total	
Author	Years	No.	%	No.	%	No.	%
Hunt (7)	1931-41	9	4.6	56	28.0	65	32.6
Munnell & Brunschwig (13)	1934-41	200	19.3	339	32.7	539	52.0
Kimbrough (9)	1933-41	7	5.4	38	29.2	45	34.6
Richards (14)	1929-41	80	10.6	246	32.5	326	43.1
Schmitz (15)	1933-41	11	6.6	37	22.2	48	38.8
Total		307	13.4	716	31.3	1023	44.7

In other words, less than 50 percent of cases of carcinoma of the cervix are diagnosed in the early stages of their development — and this occurred in an area of the body which is most easily examined by touch and sight and is accessible to biopsy.

Practically all reviews dealing with carcinoma of the cervix are based upon "5-year cures" statistics. Thus in the reports available in 1950 the year 1944 is the latest year to be surveyed and the latest 5-year cycle extends from 1940 to 1944 inclusive. From these reports no information can be obtained as to what has occurred in the diagnostic field for 1948, 1949 and 1950; and with the present system of reporting, the figures for these years will not be available until 1954 to 1956.

The curability of carcinoma of the cervix is directly related to the stage of development or extension of the carcinomatous process at the time of institution of treatment, as is shown in Table II.

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*Presented at the American College of Surgeons Sectional Meeting, Denver, Colo., April 6, 1951.

TABLE II
CARCINOMA OF THE CERVIX
PERCENTAGE OF 5-YEAR CURE BY STAGES

	(1)	(2)	(3)	(4)	Over All 5-Year Cure
Brunschwig	53	31	17	0	28.6
Kimbrough	85	47	18	0	27.6
Howes	61	42	27	8	
Kaplan	69	47	4	0	38.0
Richard	80	53	31	9	39.5
Hunt (Uni. Nebr.)	75	52	31	0	31.6
Hunt (Priv. Cases)	91	78	56	33	66.7

A study of Table II makes it apparent that in order to increase the over-all percentage of "5-year cures" of carcinoma of the cervix, two factors must be improved. One is early diagnosis and the other is better and more adequate methods of treatment.

The purpose of this paper is, first to review the methods available to make an early diagnosis and, second, to try to ascertain if the number of early cases of diagnosed carcinoma of the cervix is increasing.

Three questions may be proposed.

1. Is the knowledge of what constitutes early symptoms of early carcinoma of the cervix common property of the female lay public and for that matter of the practicing medical profession?
2. What has been done and what is being done to aid in the early diganosis of cancer of the cervix?
3. Are the scientific advances applicable not only to the specialist but also to the general practitioner?

PUBLIC INFORMATION AND REACTION

The earliest known symptoms of carcinoma of the cervix are (1) vaginal discharge, (2) contact bleeding or (3) irregularity of vaginal bleeding or menstrual flow. Unfortunately the earliest forms of carcinoma of the cervix have no symptoms.

The American Cancer Society has published and made available through many sources various articles for the lay public. Are they making use of it? Diddle(3) in a survey of the Dallas area concluded that up to 1945 the patient still wastes an average of 6.4 months before consulting the doctor.

Cave(1) reports that in his community in Mississippi for the years 1946-47 he saw 70 cases of carcinoma of the cervix. They were 5 per cent stage 1; 15.4 per cent stage 2, 12.6 per cent stage 3 and 66.1 per cent stage 4. The average time delay from onset of symptoms to the visit with a physician is 12.6 months.

Fricke, in a personal communication (1951) states — "It seems that in the past few years (1948-50) around 5 per cent of all patients have been Stage 1's, 10 per cent Stage 2, 80 per cent have been Stage 3 and 5 per cent Stage 4." Have his patients received no benefit of medical propaganda or are they immune to it because of social-financial status, seeking medical aid late in the development of this disease, or have the patients been mis-diagnosed or inadequately treated before he sees them?

Hunt's(7) recent analysis lends some additional information as to the immunity of some population fractions to medical propaganda. The University of Nebraska College of Medicine Hospital treats only indigent patients. An analysis of the percentage figures for various periods is shown in Table III.

TABLE III
PERCENTAGE OF CARCINOMA OF CERVIX
UNIVERSITY OF NEBRASKA HOSPITAL

Years	Cases	Percent Stage (1)	Percent Stage (2)	Total Stage (1 & 2)	Percent Stage (3)	Percent Stage (4)
1931-1941	194	4.6	28.8	33.4	45.8	22.2
1942-1944	60	6.6	31.6	38.2	31.6	30.0
1948-1950	63	14.2	23.7	37.9	41.2	20.6

In the ten-year period 1931-1941, a total of Stage 1 and Stage 2 cases equalled 33.4 per cent and from 1948 to 1950 only 37.9 per cent, whereas 1942--1944 the percentage was 38.2 per cent. In this time there is an increase in the percentage of Stage 1 or from 4.6 to 14.2 per cent but there is a drop in Stage 2 from 28.8 per cent to 23.7 per cent. Most of the gain for Stage 1 percentage has been at the expense of Stage 2 — not from Stages 3 and 4.

One must eventually conclude that there is a large group of women who have not been reached by American Cancer Society information; who have not had access to information which would help them to a decision to see a doctor early in the development of a carcinoma; or who through ignorance or fear, delay their visit until the carcinoma is well advanced.

SCIENTIFIC AIDES

SCHILLER TEST

The Schiller test which consists of staining the cervical tissues with iodine is not a specific diagnostic method for cancer. If an area does not take up the iodine it should be subjected to biopsy, but it is not necessarily a cancerous area.

PAPANICALAOU VAGINAL SMEAR

The development of the vaginal smear technic has been a distinct advance as a diagnostic aid in cervical cancer detection. Although it is generally recognized as a time consuming method, and not applicable as yet to use in mass surveys it has, when positive, spurred many physicians to further investigative procedures to establish a final diagnosis. With the aid of a competent cyto-pathologist, the method can be used by the general practitioner and specialist alike. Its greater use may eventually aid in the early diagnosis of cancer.

BIOPSY

A cervical biopsy is the best method of detection. Simple single punch biopsy is not as adequate as multiple biopsies taken from at least four areas of the cervix.

Foote and Stewart(4) states that in their experience with biopsy on an innocent looking cervix a biopsy of either the anterior or posterior lip would result in 50 per cent positive finding; if both areas were thus examined, 74 per cent positives would be obtained; if both these areas and areas from the lateral angles were studied 95 per cent positive biopsies would result.

This method is applicable to both general practitioner and specialist and can be done in the office.

The cone biopsy technic developed and describd by Gusberg(5) is a simple method of obtaining a circumferential biopsy of the squamous-columnar region of the cervix. It also can be done in the office by any general practitioner or specialist.

The cold knife biopsy should be circumferential and shall include all of the squamous columnar junction. It should be associated with a sharp curettage of the endocervical canal inasmuch as there are a few cases of carcinoma which develop in the canal. This method requires anesthesia, and frequently some sort of hemostasis. It does not require the services of a specialist.

ELECTRO-CONIZATION

Electro-conization is not satisfactory. The heat from the electro-conization of cervical tissues either destroys the cytologic picture or distorts it so much that an accurate diagnosis is impossible.

ADDITIONAL METHODS

Other methods of cancer detection are under study but as yet are not sufficiently established to be reliable or useful. At the University of Nebraska(11) a study of B-glucuronidase concentrations in vaginal and cervical secretions and in genital tissues is in progress.

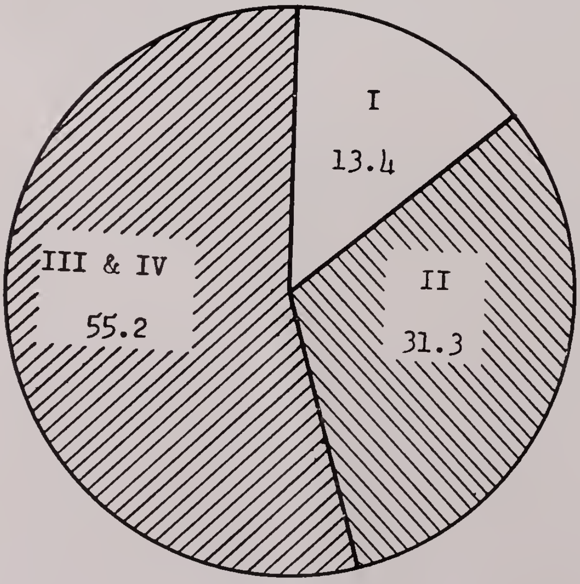
1948-1949-1950 SURVEY

What then is the picture today? Are we improving over the 1940-44 era? A questionaire was sent to a number of medical centers throughout the United States and Canada asking for the cases of carcinoma of the cervix admitted for the years 1948-1949 and 1950 and the number in each stage of the League of Nations classification. The information received is shown in Tables IV and V.

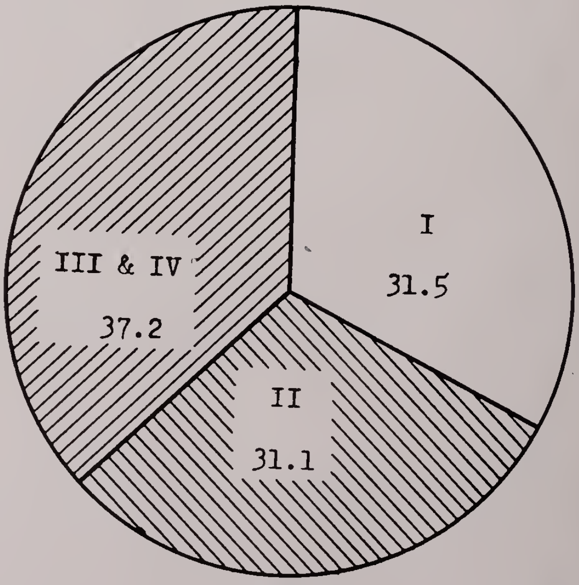
TABLE IV
CARCINOMA OF CERVIX BY STAGES EXCLUDING CARCINOMA IN-SITU
1948-1950

		Stage 1		Stage 2		Total		Stage 3	Stage 4	Total	
Hospital	Reporter	No.	%	No.	%	No.	%	No.	No.	No.	%
Royal Victorial Montreal	22	32	25.6	34	27.2	66	52.8	43	16	59	47.1
Pennsylvania Ho pital	25	10	29.4	9	26.4	19	54.8	13	2	15	45.1
Parkland Hospital	24	11	14.8	14	18.9	25	33.7	26	23	49	66.2
Montreal General	27	25	25.0	46	46.0	71	71.0	20	9	29	29.0
University of Pennsylvania	26	41	31.0	57	43.1	98	74.1	26	8	34	25.9
University of California	28	121	50.6	69	28.8	190	79.4	38	11	49	20.5
University of Iowa	10	60	36.5	61	37.1	121	73.6	34	9	43	26.3
University of Indiana	20	68	46.8	24	16.5	92	63.3	--	--	53	36.5
University of Michigan	12	28	18.3	57	37.2	85	55.5	44	24	68	44.3
University of Nebraska	21	9	14.2	15	23.7	24	37.9	26	13	39	62.1
Nebraska Methodist	21	13	23.3	22	39.2	35	62.5	14	7	21	37.5
Milwaukee Hospital and Milwaukee County Hospital	17	22	22.4	21	23.3	43	47.7	27	20	47	52.2
Vincent Memorial	23	31	30.3	35	34.3	66	64.6	16	20	36	35.2
Private Practice	16	20	29.5	22	32.8	42	62.3	19	6	25	37.6
Private Practice	18	5	18.5	4	14.8	9	33.3	14	4	18	66.6
TOTAL (Cases 1,571)		496	31.5	490	31.1	986	62.6	360	172	585	37.2

TABLE V
PERCENTAGE CARCINOMA OF CERVIX BY STAGES WITHOUT CARCINOMA IN-SITU



1931 - 1941
Cases 2,238



1948 - 1950
Cases 1,571

CARCINOMA IN-SITU

Cases of intra-epithelial carcinoma of the cervix or carcinoma in-situ are not included in Table IV. This was done for the purpose of comparing the frequency of lesions of similar extent. The exact status of the lesion, carcinoma in-situ, has not been settled to the satisfaction of all clinical physicians or pathologists.

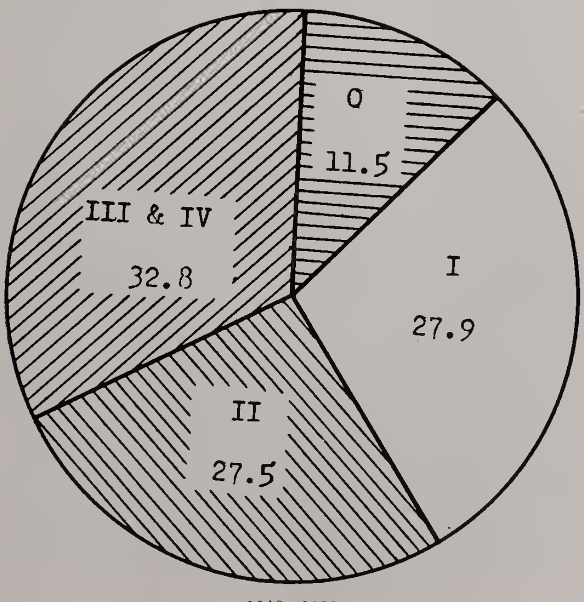
On the basis that carcinoma in-situ is an early form of carcinoma, and non-invasive, it has been given a designation known as Stage O.

Two hundred and six cases of carcinoma in-situ were reported in the survey questionaire covering the years 1948, 1949 and 1950. When these 206 cases of non-invasive carcinoma of the cervix are added to the 1571 cases of invasive carcinoma, the total number of cases is 1777. The percentage distributions are shown in Tables VI and VII

TABLE VI
CARCINOMA OF CERVIX BY STAGES INCLUDING CARINOMA IN-SITU
1948-1950

	Cases		Percentages	
Stage O	206	11.5	11.5	66.9
Stage I	496	27.9	55.4	
Stage II	490	27.5		
Stage III	360	20.2	32.8	32.8
Stage IV	172	9.6		
Stage III and IV	53	2.9		
TOTAL	1,777			

TABLE VII
CARCINOMA OF CERVIX SURVEY BY STAGES INCLUDING CARCINOMA IN-SITU



1948 - 1950
Cases 1,777

Stage O cases equal 11.5 per cent of all the cases in the survey. Stage 1 cases are 27.9 per cent, Stage 2, 27.5 per cent with a total of the three groups of 66.9 per cent.

SUMMARY

From the figures obtained from private communications there is an increase in the number of cases of carcinoma of the cervix which are diagnosed in the early stages. If the early figures of 13.4 per cent for Stage 1 and 31.3 per cent for Stage 2, with a total of 44.7 per cent are correct, then the figures of '48-'50 with percentage of 31.5 and 31.1 respectively, with a total of 62.6 per cent, for Stages 1 and 2, show a definite increase of almost 50 per cent.

Further increases are necesary and the educational program to both the layity and the medical profession must be continued. The visit to the physician by a female patient with (1) a vaginal discharge, (2) contact vaginal bleeding or (3) alternation of menstrual flow, as soon as they develop, can aid in the early diagnosis. On the other hand the physician must employ to a greater extent the accepted methods to confirm his diagnosis. These technics are simple and must be utilized at the patient's first visit. The factor of physician delay should be reduced to a few days instead of a few weeks or months.

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Myelography and Intervertebral Disc Lesions of the Low Back

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The availability of contrast media, such as Pantopaque, has made myelography a relatively safe and efficient procedure and one which is of great value in the differential diagnosis and localization of disc lesions. While it is not felt necessary to routinely do myelograms on patients with definite physical findings and history of a disc herniation, and while surgical exploration can be quickly carried out at more than one level without detriment to the patient, myelography is confirmatory proof of the presence and the site of the lesion; thereby making negative surgical findings a rarity. While, due to position, there may be a discrepancy between the size of the defect and the magnitude of the disc mass, and while at times there may be some slight discrepancy on interpretation of the level on myelography alone, usually, if it is interpreted carefully, there is remarkable correlation of defect confirmed by surgery.

The physical properties of Pantopaque allow it to flow readily in the spinal canal. It is heavier and not miscible with spinal fluid. It is not viscous like Lipiodol; does not separate into globules, and is easily removed. It is relatively non-reactive and not an irritant, such as the water soluble contrast medium, Abrodil. As it is slowly absorbed from the subarachnoid cavity, we routinely remove the media following fluoroscopy and x-ray study. A very satisfactory technique of introduction in our hands has been placing the patient prone with several pillows under the abdomen. This permits the best relaxation of the patient and alignment of the spine in the presence of muscle spasm. Sedation, of course, is given beforehand. After recording the spinal pressure, fluid is withdrawn for laboratory studies, including total protein determination. The latter is of some value in the differential diagnosis of tumor, though it may be elevated to varying degrees with disc pathology. It is important to obtain a central position of the needle to avoid injury to the nerve root and to facilitate withdrawal. We have now been using routinely 6 c.c. of Pantopaque, as there seems to be no appreciable variation in the percentage reaction. Withdrawal is no more difficult than with lesser amounts. An inadequate amount will not sufficiently fill a large canal, and an excessive quantity may obscure density shadows over small defects, edematous roots, etc.

In considering the actual defect, one may divide the findings into several types.

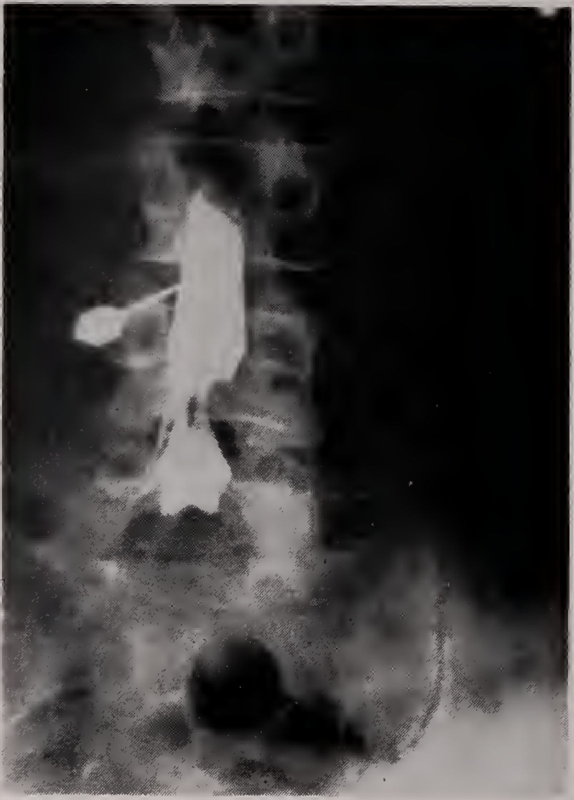

Fig. I-A

1. The first is a lateral indentation which may be large or small, and not necessarily proportional to the size of the disc mass. This is illustrated by Figure I, which shows a large defect. A smaller defect may be caused by a very large extruded mass of disc substance extending further laterally into the foramen.

2. The hour-glass configuration or stricture type of defect has been interpreted as due to a mid-line lesion, crowding the intradural nerve roots to each side and leaving the canal in the mid-line as a dome over the protrusion. This is illustrated by Figure II.

3. The third type consists of striations of the column of the medium near the margins of the dural

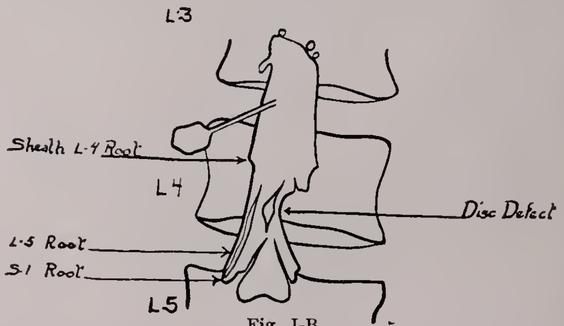

Fig. I-B

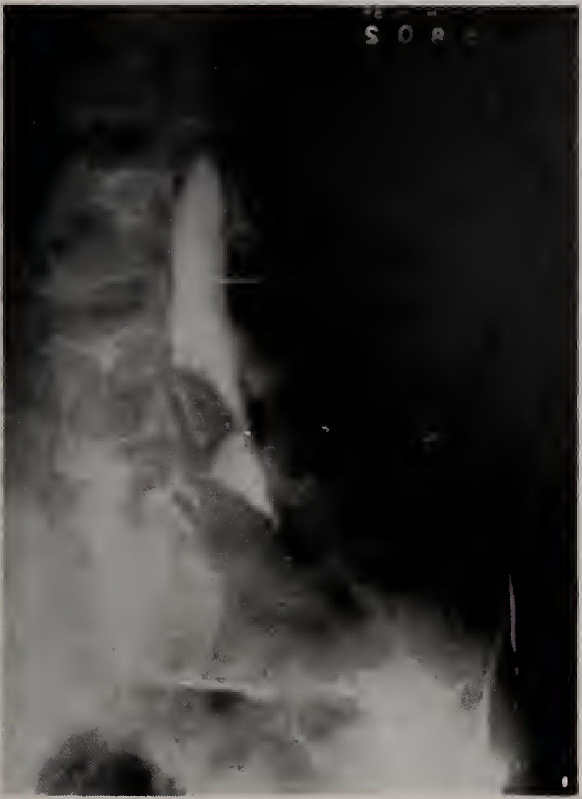

Fig. I-C

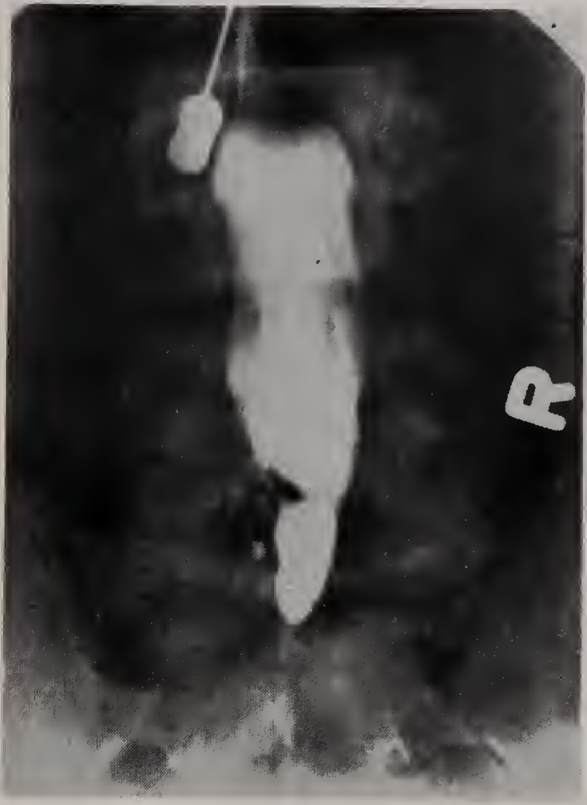

Fig. III-A

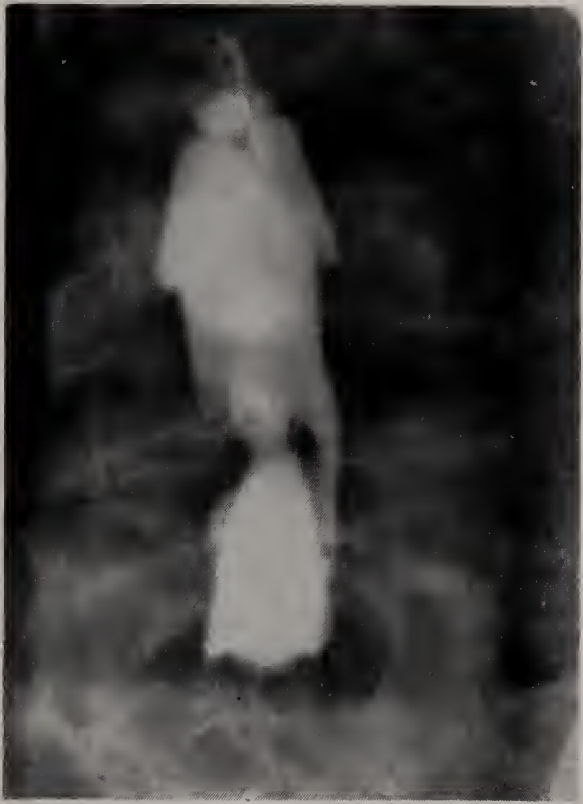

Fig. II

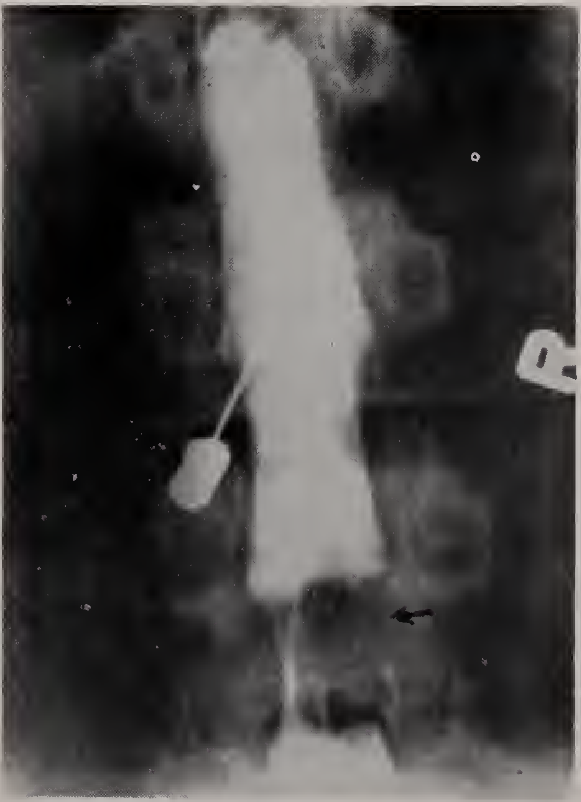

Fig. III-B

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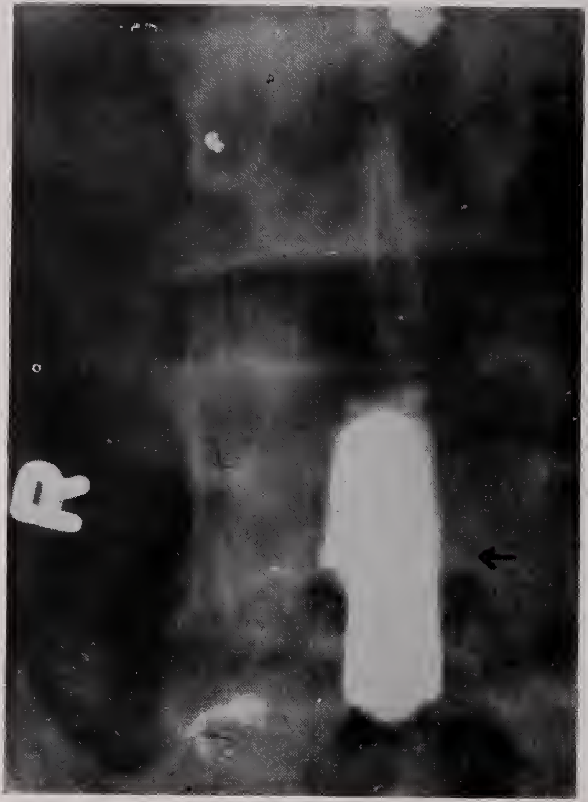

Fig. IV

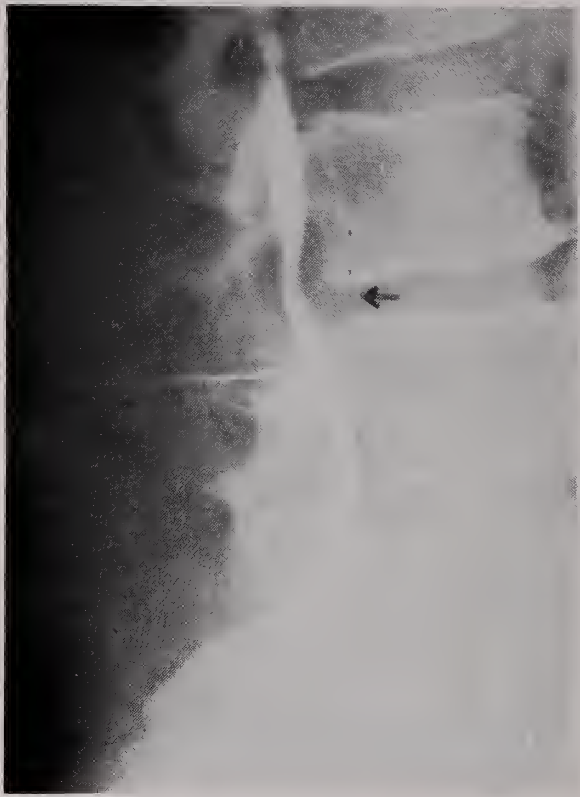

Fig. VI

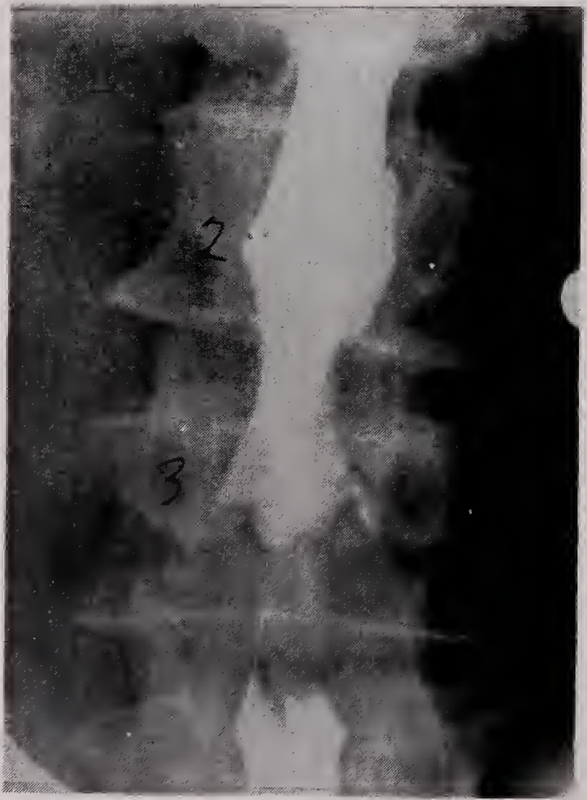

Fig. V

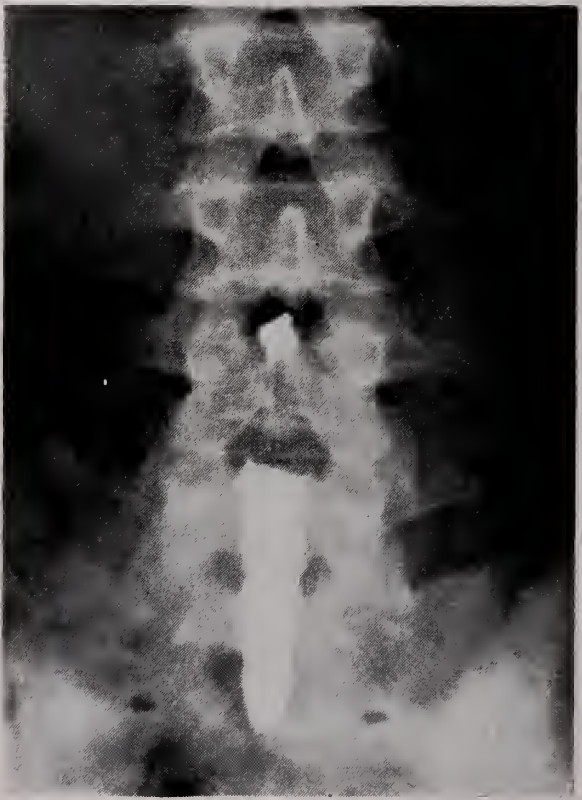

Fig. VII

(References to pictures on page 390)

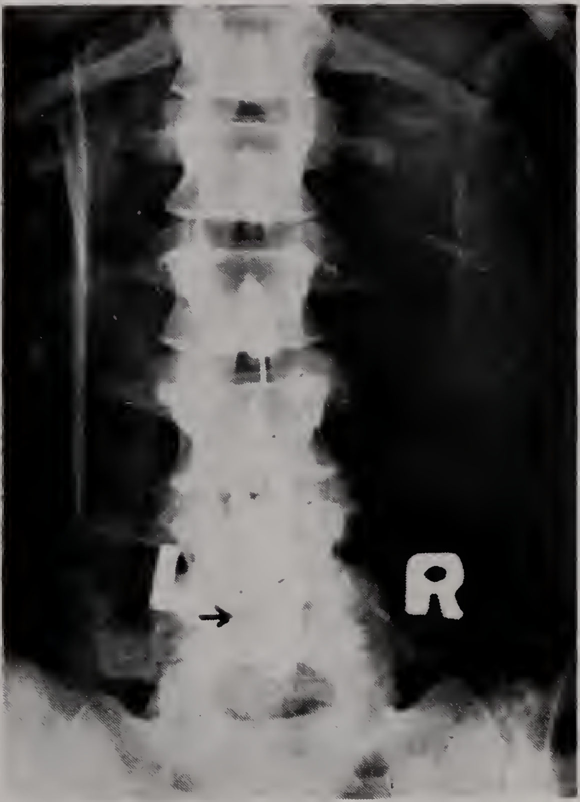

Fig. VIII

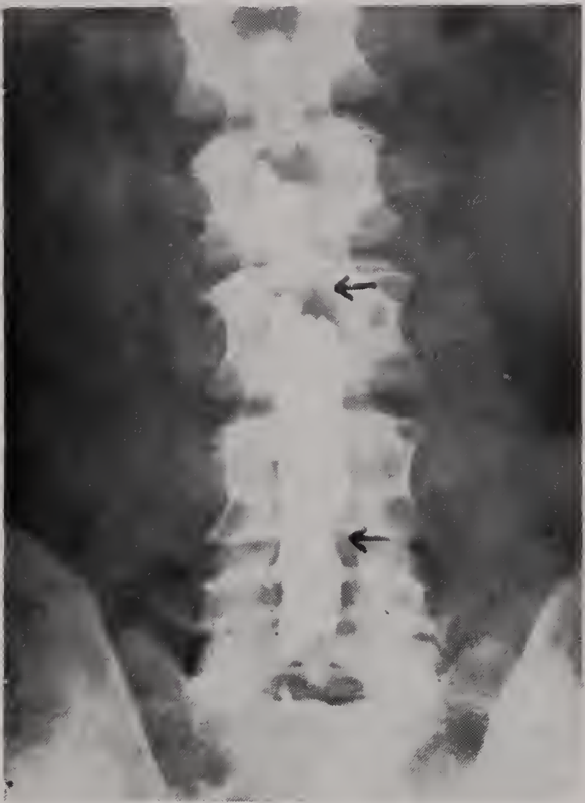

Fig. X

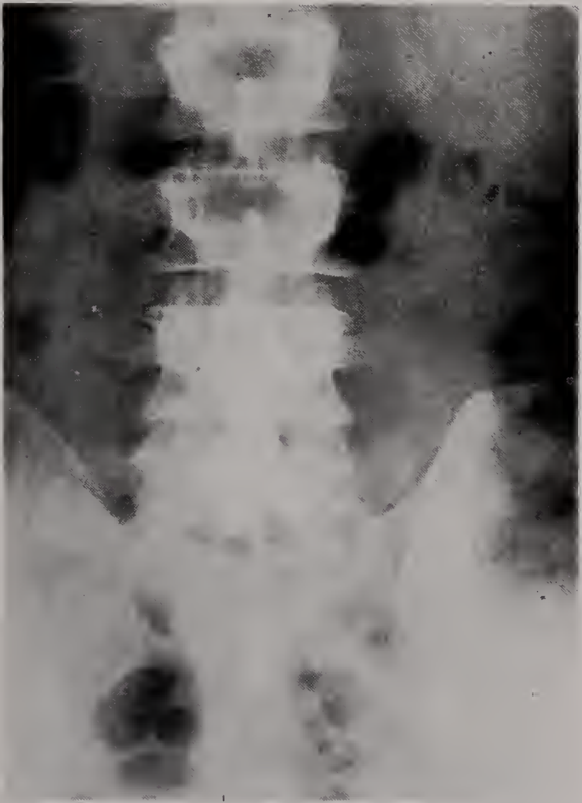

Fig. IX

sac, which is attributed to edematous nerve roots. Such a finding is seen in Figure III.

4. Asymmetry due to failure of filling of the root sheath is most apt to occur at the lumbosacral level and may be due to a very large disc protrusion. This is illustrated by Figure IV.

5. Another type is the block-like obstruction which may be complete and may require the differential diagnosis of tumor. The spinal fluid protein in these cases may be somewhat elevated, even to 80 milligrams per cent. This type defect is shown in Figure V.

6. The sixth type consists of the soft mid-line protrusion which may be exaggerted by hyperextension and may best be brought out with lateral views, as demonstrated in Figure VI.

There are several variations which may occur between the findings at surgery and those of the myelogram. However, they do not lead to error in diagnosis of disc lesions, but rather to level. Disproportion of the size of the disc mass and x-ray findings is especially noted at the lumbosacral level. Likewise, cases with a negative myelogram but positive clinical signs, in which disc pathology is confirmed at surgery, are at this level. This is due mainly to the configuration of the dura in the angle at the lumbosacral junction. Other factors may be a short cul-de-sac and lateral position possible here. Therefore, it is most important in the presence of symptoms at the lumbosacral

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level, in spite of a negative myelogram, that surgical exploration be carried out if conservative measures have failed. (Figure VII).

Another infrequent variation is that of a defect at L 4 without changes apparent at the lumbosacral joint, but with the pathology located at the lower level. The distortion is probably due to traction on the nerve root. (Figure VIII).

Multiple disc lesions are not common, though occasionally they may exist at two levels. (Figure X). However, only one usually is symptomatic and the source of complaint. This is most frequently seen in the presence of multiple degenerative disc lesions. Occasionally, there may be multiple definite changes without herniation at any level, due to congenital configuration of the canal. (Figure IX). The causes of defect may be due to degenerative or collapsed disc, osteophytes of vertebral bodies or hypertrophy of the adjacent apophyseal joints, dural adhesions, or congenital intradural changes.

It is necessary to run the contrast medium up to the thoracolumbar space, as occasionally one finds the pathology high without well defined neurological changes. Figure X shows the myelographic appearance of an extruded disc at L 2, multiple degenerative changes, and a protruding disc at L 4.

Degenerative disc lesions give rise to a definite syndrome which may well respond to conservative measures or fusion. In such a back, however, in which symptoms are unrelieved by adequate conservative measures, extruded disc pathology may be found even at the extremes of age. (Figure V).

Another important consideration diagnostically aided by the myelogram is that of neoplasm. The history in these cases, however, is usually of unremitting progression without trauma or remission, and not relieved by recumbency. There may be numbness without pain in some. Other physical findings may be present, depending upon the type of lesion. We always check the total protein content of the spinal fluid when doing myelograms as this may be elevated with a block or irritative reaction, but is not usually as high in disc pathology as it is in the case of tumor. Neoplasms may be of cord or cauda equina origin, such as neurofibromata, ependymona, neurilemmoma, etc., or metastatic from other sources. At times metastatic lesions may fail to reveal bone destruction on x-ray, and remarkably simulate disc pathology.

In conclusion, myelography is a safe and valuable procedure in the diagnosis of disc lesions, and should be undertaken in cases of contemplated surgery in which the presence and the probable location of the intervertebral disc lesion is not adequately determined from history and physical findings. A negative myelogram is not frequent if carefully evaluated, though may occur at the lumbosacral level and can be disregarded when findings clearly indicate surgery. Some variation of size and localization may occur requiring exploration of more than one level. However, these myelograms are still significant. In general, the use of this added diagnostic procedure has eliminated uncertainty and needless disc exploration.

MYELOGRAPHY AND INTERVERTEBRAL DISC LESIONS OF THE LOW BACK

Figure I. A, the myelographic diagnosis here was extrusion of the disc at the 4th lumbar interspace. This shows a large lateral defect with root striation.

B, is a drawing of A, showing the relationship of the disc, canal, and vertebral bodies. There is no narrowing of the 4th interspace. Degenerative changes of the nucleus may occur early without x-ray evidence at the involved level. On symptoms alone, it may at times be difficult to differentiate between pathology of the 4th and 5th lumbar levels.

C. oblique view of same case.

Figure II. This is an hour-glass defect at the 4th interspace, usually due to a mid-line lesion crowding the intradural nerve roots to either side.

Figure III. A, a mid-line defect of the 4th interspace producing striations of the column of medium attributed to edematous nerve roots.

B, same case showing large mid-line defect which is obscured in A by the medium, except for the striations.

Figure IV. Here a large extruded disc at the lumbosacral level on the left revealed only asymmetry of filling of the root sheath on the involved side.

Figure V. In this case there is a block type of defect at the 3rd interspace due to a completely extruded disc. The spinal fluid protein in this case was normal, though some elevation is not infrequently encountered in this type of lesion. The patient was 73 years of age and had had multiple degenerative disc changes. He previously had had repeated episodes of back complaint, all relieved conservatively until this last occurrence with complete extrusion of the disc mass at L 3.

Figure VI. This is a mid-line disc protrusion which, at times, may be best visualized on a lateral film. There is rather marked osteophytic change of the vertebral bodies at this interspace.

Figure VII. Myelographic findings showed no apparent defect here, although a large protruded disc was found at the 5th interspace on the left in this case. There were very definite clinical findings at that level.

Figure VIII. Myelographic findings here indicated a disc lesion at the 4th interspace on the left. At operation, however, the 4th interspace was normal and a large extruded disc was found on the left at the lumbosacral level.

Figure IX. Alterations in configuration of the canal at the 4th and 5th levels in this case were not the result of herniated disc pathology.

Figure X. There were multiple defects in this case with complete extrusion of the nucleus at L 2 level.

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A New Concept in The Management of Idiopathic Pruritus Ani

PRELIMINARY REPORT

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The purpose of this report is to describe the results obtained in a limited series of patients in the treatment of idiopathic pruritus ani by means of an entirely new therapeutic approach.

It has been noted that in patients with idiopathic pruritus ani there is a striking similarity between the "cooked" appearance of the mucous membrane and skin surrounding the anus and the skin surrounding an open ileostomy wound. This observation led to the supposition that perianal inflamation might be due to the presence of lysozymne or trypsin in the stool, which caused partial digestion of the skin and consequent pruritus. This theory could readily explain the presence of anal itching in the entire absence of other gross pathology in the anorectal region.

It has been shown by Smith(1) and others(2) that sodium lauryl sulfate effectively inactivates lysozyme and probably other enzymes by forming insoluble, inactive protein complexes. It was felt that the local application of sodium lauryl sulfate or other detergent materials to the rectum would neutralize active enzymes in the stool and thereby overcome the supposed cause of idiopathic pruritus ani.

Initials	Age	Sex	Occupation	Duration of Disease	Known Precipitating Factors	Previous Rx	Lgth. of Treatment	Results
C.W.	68	M	None	3 mo.	Severe catharsis	Ointments of all types	1 mo.	Complete relief
C.L.L.	70	M	Salesman	6 mo.	Rectal prolapse	Anaesthetic unguent	6 wks.	Complete relief
R.C.	52	M	Attorney	3 yrs.	None	Anaesthetic unguent	4 mo.	Complete relief
V.L.H.	68	M	Teacher	5 yrs.	Death of wife	Anaesthetic unguent	3 mo.	Complete relief
R.U.	44	M	Physician	3 mo.	Following oral antibiotic therapy	None	1 mo.	Complete relief
B.F.	52	F	Housewife	1 yr.	Hypermotility of bowel	Ointments and rectal surgery	4 mo.	Marked relief
C.F.	29	M	Salesman	5 mo.	Amoebic dysentery	Anti-amoebic treatment	3 mo.	Complete relief
V.K.	27	M	Office Worker	5 yrs.	None	Tattoo	2 mo.	Complete relief
A.B.	58	M	Bench Worker	3 yrs.	Hemorrhoids cryptitis	No surgery	1 mo.	No relief
E.L.	26	M	Singer	3 yrs.	None	Ointments	1 mo.	Complete relief
R.H.	49	M	Contractor	5-6 yrs.	None	All types	2 mo.	Complete relief
E.R.	45	M	Physician	4 yrs.	None	All types	3 mo.	Complete relief
S.H.	18	F	Student	3 yrs.	Ulcerative colitis	Ointments	1 yr.	Relieved when use
B.L.	28	F	Housewife	1 yr.	Marked hypermotility of bowel of nervous origin —hemorrhoids	All types	Could not tolerate	No relief
R.M.	55	M	Salesman	6 mo.	Following oral antibiotic therapy	Ointments	3 mo.	Complete relief

METHOD

The results obtained in a small group of patients were highly satisfactory and indicated that a larger series of patients should be treated by means of this approach to thoroughly explore the value of this method.

To introduce the detergent substance into the rectum a suppository was compounded incorporating 100 mg. of sodium lauryl sulfate in a base consisting of carbowax 4,000*. This base requires no refrigeration even at high environmental temperatures. The technique of administration was simple. The patient was instructed to insert one suppository into the rectum after each bowel movement. This procedure insures the presence of an enzyme inactivator in the rectum at all times. Experience showed that after the above procedure was followed for a week or ten days, the symptoms were sufficiently alleviated to permit administration once or twice weekly without recurrence of the itching. There was usually a marked improvement in both the objective and subjective symptoms within a period of about three days.

RESULTS

The results obtained are shown in the accompanying table. It is interesting to note that a great majority of the patients treated were engaged in sedentary occupations. Typically, pruritus ani occurs only rarely in the laborer. Its victims are usually under nervous tension while carrying out their occupations. Meyer, et al(3), has definitely shown that the amount of lysozyme excreted is markedly decreased when the vagus nerve is cut. It would seem that there is a correlation between consistent vagus stimulation and idiopathic pruritus ani.

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*Neutrazyme Suppositories (Manufactured by Smith-Dorsey, Division of the Wander Company).

Another interesting fact has developed in recent months. Pruritus ani is becoming more common following the use of oral antibiotics and will continue long after the antibiotic has been discontinued. One can surmise that the diminution of coliform organisms in the intestines has a tendency to lower the hydrogen ion concentration of the stool, thus allowing less effective inhibition of tryptic enzymes.

Sodium lauryl sulfate suppositories produced good results when the pruritus was classed as a post-antibiotic symptom. The consistent failures in this series occurred in individuals where significant gross pathology was present in the rectum. While surgical procedures and other methods of treatment have failed in a great number of patients to relieve pruritus ani, it also holds true that when there is a significant amount of gross pathology present, even the neutralization of tryptic enzymes will not effectively control the condition. Where itching persisted following surgical correction, sodium lauryl sulfate effectively relieved the symptoms. The two failures listed in Table I were cases with gross rectal pathology. In all cases where the symptoms were controlled using the above procedure, no symptoms recurred for periods varying from three to 18 months. When symptoms recurred after a few months, they were usually associated with psychic trauma or other conditions that apparently disturbed the motility of the bowel or possibly the enzyme content of the stool.

SUMMARY

A new concept in the therapy of idiopathic pruritus ani has been described. This treatment is based on the fact that tryptic enzymes can be neutralized by use of detergent materials such as sodium lauryl sulfate. Clinical observations led to the conclusion that the condition could possibly be due to the local action of enzymes. The results in treating a selected series of patients tended to prove this assumption. It has been stressed that very little relief can be expected in this type of treatment in the presence of gross pathology that can be corrected by surgical procedure.

I wish to thank Dr. Stanley Roberts and Dr. F. L. E. Sauer whose clinical observations on a portion of these patients made this report possible.

(Since submitting this report an additional one hundred and thirty cases have been gathered with an over-all relief in 83% of the cases. This relief occurred in an average of 3 days after beginning therapy).

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The Educational Plan of The American Academy of General Practice

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With the founding of the American Academy of General Practice, some four years ago, a new and unique organization joined the group of medical societies. It was unique in that to continue as a member of the Academy the individual had to devote a certain period of time each year to formal study in the advances of medicine.

It is the underlying philosophy of the American Academy of General Practice that, in this day of rapid expansion in the field of medicine, if the man in general practice does not constantly strive to keep up with the modern advancements he will soon fall by the wayside. Medicine is a life-long educational experience. The Academy is attempting to furnish the stimulation necessary to continue this experience, and by the educational requirements to be met each year has supplied a most beneficial means of attaining this end.

The Academy further believes that if the general practitioner is to give the best service to his patients, he must not only keep abreast of medical advances, but also from the time he is a medical student his training should be directed along those particular lines which will enable him to better carry on the duties of a man in general practice. To attain this the Academy is encouraging a program in our medical schools and hospitals beginning with the medical student and continuing through the period of residency.

In order to develop the field of general practice for the medical student a varied assortment of programs are being tried by a number of the medical schools. In some, lectures in general practice are given by various physicians engaged in that field of medicine. This is proving satisfactory to a certain degree. In others, the course is given by a member of the faculty who by virtue of his own experience is eminently qualified to discuss the subject. Another plan is that in the outpatient clinic the patient is first seen by a general practitioner under whose supervision the student takes the history and examines the patient. The patient is then seen by whatever specialists the findings in his case warrant. By this means of teaching the student is able to study the patient as an individual, rather than as a certain disease entity. The undergraduate student thus learns better when to call on the specialist and when to rely on his own judgment.

A number of hospitals throughout the country are developing a program for a residency in general practice. Some are in hospitals affiliated with medical schools and others are in non-affiliated hospitals. These residencies vary from one to three years. During this time stress is laid on Surgery, Medicine, Obstetrics and Pediatrics. After the completion of this service the young doctor has had the opportunity to gather knowledge that will help him serve his patients as a general practitioner.

It is not too difficult to set up a program of general practice education during the time the individual is in medical school and in his hospital work. The problem arises when it is attempted to set down a list of requirements that the doctor in practice must meet. Numerous factors must be taken into consideration, a few of which are: The ability of the doctor to get away from his practice for post-graduate study, availability of medical meetings that will have adequate educational value and a system whereby a satisfactory program can be taken to the doctor.

In attempting to set up a plan of continued education for the doctor the question arose as to what should be considered an adequate amount of education each year and how best to obtain it. As a basis on which to work the Academy has set up one hundred and fifty hours of post-graduate study required over a period of three years. There was, and still is, considerable feeling within the Academy as to how nearly this comes to being the proper requirement. Some would lower the time required, while others would raise the figure to as high as four hundred hours.

The basis on which the one hundred and fifty hours were determined was from the fact that about one week of post-graduate study a year — about thirty-five hours — would barely meet the basic needs of keeping abreast with the advancing problems of medicine. In three years this would be one hundred and five hours. Thus, to make the requirement a little higher than this minimum, a figure of one hundred and fifty hours was decided upon.

Whether or not 150 hours is too high, or too low is yet to be determined from experience. However, it must be remembered that if the number of hours is put too high there will be many doctors who will not care to take the necessary time to fulfill the requirements. On the other hand, should the hours be dropped, say to one hundred every three years, there is a question as to whether the requirements would be worth fulfilling. Recently the writer attended a meeting at which this question came up. The arguments were long and heated on both sides, which is good evidence that this still is not a set and settled question among even those who do some of the educational planning of the Academy.

The number of required hours having been determined, the next point is how are these hours to be earned. In general, doctors attend three classes of meetings: (1) local, as county medical society, hospital staff meeting, etc; (2) state and national conventions and other meetings at this level; (3) post-graduate meetings. With this division the doctor gets credit for one hundred hours every three years for meeting from the local, state and national level and fifty hours for post-graduate work. It has not proven too difficult to accumulate the one hundred hours of so-called informal training. The hospital staff meetings, county society and the state and national conventions soon run well over one hundred hours for the three-year period.

The remaining fifty hours of "formal" training has caused much confusion and misunderstanding. Just what is to be considered of such a caliber as to warrant it being classed "formal" or not? No fast and absolute rule has as yet been laid down. However, it may be said as a generality that a course or program sponsored by a medical school in a particular field of medicine will be accepted.

Little difficulty has been had by members of the Academy in earning the one hundred informal hours. Likewise, those members who live in or close to large cities where there is a medical school find no trouble in acquiring the fifty hours of formal study. It is the individual located in the rural area who finds the last requirement somewhat difficult to meet. However, this does not need to be too much of a barrier and in different parts of the country the problems of this group are being solved by various ingenious means.

In the rural areas some doctors are able to take a week or two away from practice each year for a formal post-graduate course and this readily supplies the required number of hours. Another source of credit is the alumni reunion with an associated post-graduate assembly which furnishes a certain number of formal hours for many who feel they can take only two or three days away from the office. This and other similar meetings of like duration are proving to be the answer for many in the fulfillment of their meetings for formal credit.

Thus far we have been discussing the doctor going to the meetings that will afford him the necessary credits both formal and informal. Now let us consider very briefly bringing the credits to the doctor. In some localities, the doctors have arranged to bring in outside speakers to give courses on certain subjects. This program may be put on for a half day, or even for only an evening, over a period of several weeks until the material has been covered. As a usual thing, these speakers are associated with some nearby medical school. With the medical school agreeing to sponsor the program, it can usually be rated as acceptable "formal" training and the proper number of credit hours can then be earned by those attending.

The State of Kansas, through the State Medical Society and the school of medicine, has developed a program of post-graduate education for the doctors of the State. By means of teams of two doctors each on a so-called circuit course program, a large portion of the state is covered and the latest advances in the medical field are made available to the doctors. While this program has not as yet been given credit for formal hours training by the Academy, it is hoped that it will do so soon.

Medicine being a life-long education, we have briefly seen how the American Academy of General Practice is endeavoring to make that philosophy a reality. The requirement that its members be not satisfied to remain static in their profession, but always to improve themselves by keeping abreast of the newest medical advances, is paying dividends in the benefits it is bringing to its members. It is hoped that the requirement of one hundred and fifty hours of training every three years will be met by all the members of the Academy in their effort to better themselves and their profession and that they will make every possible effort to attain that goal. And for those who have slipped by the wayside in failing to live up to the educational requirements of the Academy, we can only paraphrase a recent hit parade song and say, "So Long, It's Been Good To Know You."

The Pull-Through Operation for Ano Rectal Carcinoma*

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The handling of malignant diseases in the lower bowel is one of the most challenging problems in modern medicine. It is a problem from the standpoint of diagnosis and surgical treatment as well as a moral challenge to the physician in doing his best for the health and happiness of his patient.

From the diagnostic standpoint it is still true that a too high percentage of patients with carcinoma of the bowel lying within the reach of the examining finger receive medical and surgical treatment for their symptoms and signs of rectal carcinoma months in advance of the discovery of the true nature of their disease. This is a challenge to us all.

The moral responsibility of the physician who has a patient with rectal carcinoma is one of giving his patient the very best treatment which will rid him of malignant disease.

Psychologically as well as morally the physician should not subject his patient to the mental and physical trauma of a permanent abdominal colostomy if he can eradicate the tumor as well without a permanent colostomy.

It is now accepted by most surgeons that carcinoma of the sigmoid colon which is one inch above the peritoneal reflection is best treated by wide resection of the colon and its mesentery with attending gland bearing tissues and vessels and reuniting the colon by an end to end anastomosis, with or without an attending temporary transverse colostomy or cecostomy to relieve the pressure on the anastomosis during the healing period.

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*Read before the Omaha Mid-West Clinical Society, 1950.

Within the last fifteen years much work has been done on primary anastomosis of the colon between this point (the critical point of Sudek) and the mid-rectum. These operations have been called Anterior resections or Recto-sigmoidectomies. They have been done with and without attending temporary transverse colostomy or cecostomy.

In 1908, Miles first reported the combined abdomino-perineal procedure for carcinoma in this area, in which the entire bowel from the mid-sigmoid down to and including the anus was removed by opening the abdomen, freeing the bowel from above down into the hollow of the sacrum and dividing the bowel well above the tumor, bringing the upper end out through the wound as a permanent abdominal colostomy: then removing the rest of the rectum and anus from below in one or two stages. This procedure with a few modifications has been and is still one of the most frequently used operations for carcinoma in the lower bowel. It allows the widest possible resection of adjacent tissue and bowel in curing cancer. It leaves the patient with the problem of a permanent colostomy. It is attended by a low surgical mortality rate and a five year survival rate of around 40 or 50%. It has been adequately proven by numerous investigators who have studied lymph nodes removed at surgery or autopsy that carcinoma of the lower bowel spreads upward and laterally, not downward until the upper lymphatics are blocked by carcinoma cells and therefore the cancer is beyond the reach of the surgeon. Lateral lymphatic spread is best controlled by wide lateral dissection including healthy as well as diseased tissue in order to fulfill the requirements of adequate cancer surgery. It is difficult to work solely through an abdominal incision as in a rectosigmoidectomy, and get adequate lateral dissection while doing an end to end anastomosis.

About two years ago two patients came to me who had previously undergone a radical Miles combined abdomino-perineal resection for carcinoma of the rectum in which the entire anus and skin about the anus, the rectum and a good portion of the sigmoid had been removed leaving them with a permanent abdominal colostomy. These two people asked if I could move the colostomy from the abdominal wall to the anal area. I pointed out this might be possible but they would have little or no control over the fecal flow. Both patients resented the presence of the permanent colostomy so severly they were willing to remove the colostomy from the abdominal wall. I was pleasantly surprised at operation to find the length of sigmoid remaining up to and including the abdominal colostomy was quite sufficient to reach down to the anal area, thus transplanting the abdominal colostomy to the perineal area, after the method of Babcock. This was done for psychological, personal or marriage reasons. This pointed out to me that in a radical combined abdomino-perineal operation the amount of colon left to make the colostomy was quite sufficient in most cases to reach to the anal area.

With this knowledge then that the length of colon to be left behind in order to pull the remaining sigmoid down to the anal area was no greater than that left in a radical colostomy operation and with the information that carcinoma in the rectal area does not spread much distally until it has clogged the upward lymphatics, I began to study the procedures by Bacon and Babcock of fastening the cut end of the sigmoid colon to the mucosa of the anus; doing a combined resection by going in through the abdomen first and freeing the colon down into the hollow of the sacram; widely, as it is done in a radical operation from above and then going down below and opening the anus and removing the lateral structures as in a classical radical operation without actually removing the ex-ternal anal sphincter or anal mucosa. The operation is planned to pull out the rectum and sigmoid through this incision at the anus and suture by an open anastomosis, relying upon irrigation and the antibiotics to control the infection. This has been done before by others except for the modification which I made of tipping the anus outward from this skin incision, completing the radical operation by suturing the high sigmoid to the anal mucosa. I have done temporary transverse colostomies on all patients to facilitate healing at the anastomosis.

By presenting the record of Mrs. J. S., age 36, we can demonstrate the results of this technique. This patient gave birth to a son in November 1948: in January 1949, a tumor mass was found involving the anterior rectal wall, about 3 cm. beyond the dentate line and involving the posterior vaginal wall. On February 3rd, 1949, a combined abdominal-perineal resection was done preserving the anal mucosa and external sphincter and the sigmoid colon was anastomsed to the anal mucosa. The posterior vaginal wall was resected along with the tumor and the perineum restored by drawing the vaginal wall together and the stubs of the Levator muscles together. A temporary transverse colostomy was done. Healing was satisfactory and the transverse colostomy was closed in May 17th, 1949.

In October, 1950, this patient is quite well, has gained considerable weight, and is very happy with her present condition in which she takes a small cleansing enema each morning and has complete rectal control as compared to when she had the temporary transverse colostomy. One of her neighbors has a permanent transverse colostomy and this makes the patient extremely appreciative of her bowel control. One of the questions on her last visit was whether she should have another child.

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Clinical Electroencephalography in Convulsive Disorders

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Part I

This is the first of two articles intended to familiarize the general practitioner and others who may be interested with the usefulness of electroencephalography in the evaluation of various disorders of the brain. This article deals with electroencephalography as an aid in the diagnosis of the epilepsies and related convulsive disorders. The second article will deal with electroencephalography as an aid in the evaluation and localization of brain lesions.

Electroencephalography is the technique of recording the rhythmic electrical activity of the brain ("brain waves"), using suitable pickup electrodes, amplifiers, and a recorder which traces the brain waves on a moving strip of paper. Next to a careful case history, it is the most important clinical procedure in the evaluation of epilepsy.

Certain electrical events in the brain invariably accompany a clinical epileptic seizure. If a clinical seizure occurs without a concomitant electrical seizure in the brain, it is not an epileptic seizure. It may be due to other acute or chronic physiological aberrations, for example, hypoglycemia or certain toxins, or it may be a sign of hysteria, or simply malingering. It is not epileptic.

There is also one class of clinical seizures which may be accompanied by brain electrical seizures, but which is probably best not classified under the epilepsies, namely seizures occuring during acute infections which affect the brain, for example, encephalitis, meningitis, and neurosyphilis. Such states may, however, give rise later to symptomatic epilepsy. Febrile seizures occuring in infants may be an early sign of idiopathic epilespy, especially if they are recurrent and there seems to be no reason for the fever.

The epilepsies may be divided into two broad groups: (1) idiopathic, including classical grand mal, petit mal, and possibly psychomotor epilepsies, and (2) symptomatic, including focal and generalized seizure states of various kinds following insult to brain tissue. In idiopathic cases the EEG usually shows generalized abnormalities, distributed symmetrically over the two hemispheres, but frequently more prominent over the anterior half of the head than over the posterior. In symptomatic cases the EEG usually shows abnormality confined to one area, or present in several areas, but definitely maximal in one area — the area of residual injury.

THE NORMAL EEG

The normal adult human EEG taken under standard conditions when the patient is awake shows principally two kinds of brain electrical activity: (1) 8-12 per second sinusoidal waves with an average amplitude of 35 microvolts, which are most prominent over the posterior half of the head — this is the "alpha rhythm"; and (2) low voltage fast activity of frequencies above 18 per second and less than 10 microvolts amplitude—often called beta activity. There are wide individual differences in the prominence of the alpha rhythm, and about 5 per cent of normal records consist almost entirely of low voltage fast activity (Fig. 1, tracings A-C).

As the patient falls asleep the alpha rhythm first drops out. Then 4-6 per second "drowsy" waves appear (Fig. 1, tracing D). Gradually the activity becomes slower and its amplitude increases. Bursts (i.e., 1 to 3 second groups) of 12-15 per second waves appear over the sensory-motor area of the brain (Fig. 1, tracing E). These bursts, which are called sleep spindles, recur at 5 to 20 second intervals. They are a sure sign that the patient is asleep. Single high voltage 5 per second waves may appear also over the same area. These are sometimes called humps (Fig. 1, tracing E). In deep sleep the EEG shows only very slow waves, mostly slower than 2 per second, and of high voltage, mostly over 200 microvolts in amplitude (Fig. 1, tracing F). Such very slow waves are also seen in moderately deep anesthesia. When they are present over all brain areas they are a sign of profound unconsciousness.

There are also age variations among normal EEG. It would require too much space to go into these variations in detail. Briefly, in the newborn there is very little brainwave activity. This is in accord with the immature state of cortical neurons at birth. The alpha rhythm appears at about the age of 4 months at a frequency of 3-5 per second — about one-half of the adult frequency. During the next several years the alpha rhythm gradually increases in frequency, and reaches the adult frequency sometime between the ages of 10 and 15 years. Children's EEGs are usually more irregular than those of adults. Many features which would be considered abnormal if appearing in an adult record, must be interpreted with caution.

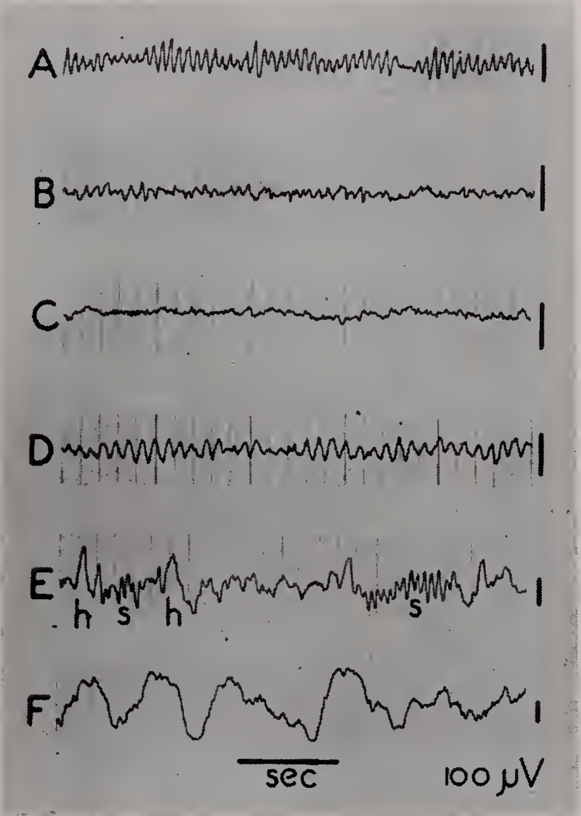

Fig. 1. Tracings from Normal Adults: A-C: "basal" tracings from the right occipital areas of three subjects, showing individual differences. D: "drowsy" waves, tracing from the right motor area. E: "sleep spindles" (s) and "humps" (h), tracing from the left motor area. F: high voltage slow waves during deep sleep, tracing from the left frontal area.

A very gradual increase in frequency of normal EEG rhythms continues throughout life. The EEGs of many normal old people show predominantly fast activity which would not be normal for younger persons.

In contrast with the EEG recorded while the patient is awake, the patterns accompanying the various stages of sleep remain relatively constant throughout life after first appearing toward the end of the first extrauterine month.

ABNORMAL SIGNS IN THE EEG

In general there are four kinds of indicators of cerebral abnormality which may be seen in the EEG:

1. Activity slower than 8 per second and of moderate or high voltage recorded while the patient is awake. The slower the waves and/or the greater their amplitude (voltage) the more abnormal they are. Slow waves are of course normal during sleep.
2. Activity faster than 12-13 per second and greater than 15 microvolts in amplitude either during wakefulness or sleep, except for "sleep spindles."
3. Spikes. These are sharp-pointed waves, which are usually of fast frequency, and appear either singly or in groups.
4. Amplitude asymmetry. This consists of prominent and persistent depression of activity in one brain area as compared with that in other areas, especially that in the homologous area if the opposite hemisphere. Slight or transient differences in amplitude between areas are usually not significant.

The first two of these signs of abnormality — slow or fast activity — may be generalized or diffuse (i.e. occur more or less equally over the entire surface of the brain) or may be localized (occur only over one area of the brain or be definitely maximal over one area). Spikes may be generalized, but are usually localized when they occur alone. In certain conditions, to be described below, they occur with certain kinds of slow waves, and then they are frequently generalized. Amplitude asymmetry is by definition a localized sign of abnormality.

EEG ABNORMALTIES IN PETIT MAL

During clinical seizures, EEG patterns are quite distinctive. Between seizures EEG abnormalities are less consistent and any of the above abnormal signs may be present, either alone or in complex combinations. However, certain abnormal patterns are more common than others, and some are almost pathognomonic for epilepsy. In this section EEG abnormalities associated with petit mal will be described, and in following sections those associated with grand mal, psychomotor epilepsy, and focal seizures will be taken up.

Probably the most easily recognized of all abnormal EEG patterns is that accompanying the petit mal seizure. The pattern consists of one or more spikes followed by a smooth-contoured slow wave (Fig. 2, tracings A and B). This spike-and-wave complex occurs at the rate of 3 per second and is usually generalized, although it tends to appear first in the frontal areas and be most prominent there. In a few cases the spikes may be missing.

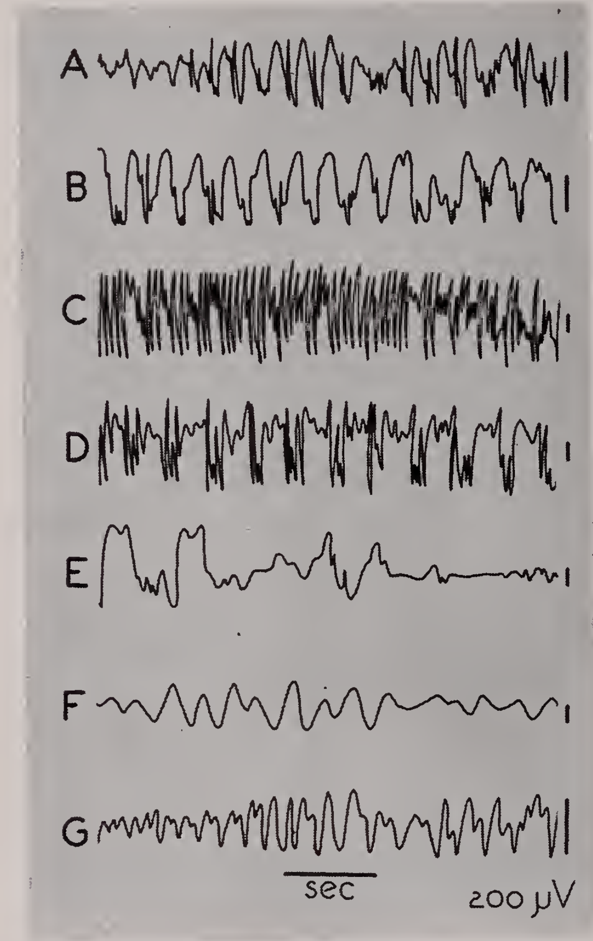

Fig. 2. Tracings During Epileptic Seizures. A and B: spike-and-wave patterns during petit mal seizures in two patients, left frontal area. C: continuous spiking during grand mal seizure, tonic phase, left motor area. D: intermittent spike bursts with slow waves during grand mal seizure, clonic phase, left motor area. E: end of clonic discharges and beginning of "flat" period at the end of grand mal convulsions, left motor area. F: beginning of slow waves during comatose period following grand mal seizure, left motor area. G: activity during a psychomotor seizure, right fronto-temporal region. Tracings C-G were retraced from the original records. Note voltage calibrations at right.

Unfortunately for the electroencephalographer, few epileptics, except severe cases, are likely to have a seizure during the brief EEG recording period. Therefore we must depend largely upon the less consistent interseizue EEG record. The most common interseizure finding in cases of petit mal is runs of high voltage 3 per second waves with or without spikes, occurring principally in tracings from the frontal lobes, but usually with spread to other areas (Fig. 3, tracing A). Fortunately 2 or 3-minute periods of vigorous hyperventilation will induce high voltage 3 per second waves or spike-and-wave seizures in the EEGs of a very large percentage of petit mal patients, and will frequently induce clinical seizures.

EEG ABNORMALITIES IN GRAND MAL

Continuous runs of very high voltage spikes over all brain areas accompany the tonic phase of the clinical grand mal seizure (Fig. 2, tracing C). These gradually break up into intermittent bursts of spikes with intervening slow waves (Fig. 2, tracing D),

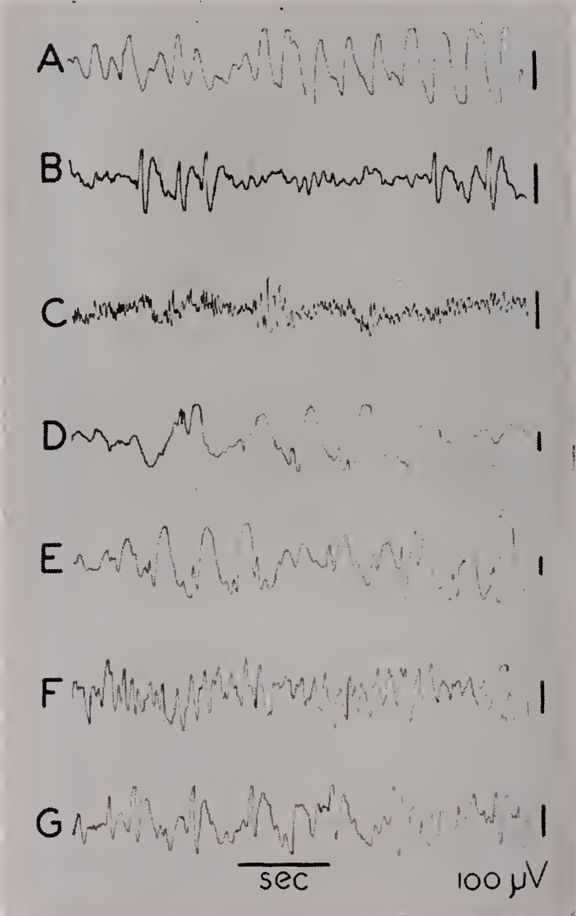

Fig. 3. Interseizure Abnormalities in the EEG in Idiopathic Epilepsy. A: high voltage 3 per second waves, right frontal area, 7 year old girl with grand mal and petit mal. B: single spike, right temporal area, 6 year old girl with psychomotor seizures. C: high voltage fast waves and spikes, left motor area, 24 year old man with grand mal. D: petit mal-variant complexes during sleep, right parietal area, infant with grand mal. E: spike and-wave complexes during sleep, right motor area, 12 year old girl with grand mal, petit mal, and mental retardation. F: high voltage 7 and 15 per second waves during hyperventilation, right parietal area, 15 year old boy with psychomotor episodes and behavior problem. G: single spikes and slow waves during sleep, right temporal area, 6 year old boy with psychomotor seizures.

and as this occurs the clonic phase of the seizure appears. The bursts of spikes and the clonic muscular contractions become less and less frequent, and then suddenly stop (Fig. 2, tracing E). There follows a period of absence of activity in the EEG which may last for many minutes. Gradually slow waves appear and finally dominate the record (Fig. 2, tracing F). Throughout the "refractory" and slow waves period the patient remains comatose. As he recovers consciousness his usual EEG pattern reappears.

There is no abnormal sign in the interseizure record which is pathognomic for grand mal. There are however several which are very suggestive. The best of these are isolated or scattered spikes or groups of spikes (Fig. 3, tracing B), sometimes mixed with high voltage slower waves. Other very suggestive signs are the presence of high voltage fast waves (Fig. 3, tracing C) or of high voltage smooth-contoured slow waves, usually in the 3-6 per second frequency range. The latter may be brought out by hyperventilation. Isolated spike-and-wave complexes are also common in interseizure grand mal records. These may be at the 3 per second frequency of petit mal, or the slow wave may be larger and slower (Fig. 3, tracings D and E), are more rarely, faster. These latter are called petit mal-variant complexes; in some patients they occur in runs and are accompanied by petit mal seizures.

Various other abnormalities, which are not specifically suggestive of convulsive disorder, may be present in the interseizure records of grand mal patients. These are mostly various kinds and amounts of slow activity or mixed fast and slow activity.

Hyperventilation is one method for inducing signs of abnormality in the EEGs of grand mal patients, but it is not as useful as it is with petit mal. Sometimes it induces the classical petit mal spike-and-wave pattern. When it does it is frequently discovered on close questioning that the patient also has petit mal seizures which were not previously recognized, but this is not always the case.

It has been found in many cases in which the EEG record obtained while the patient is awake fails to show abnormality, that the sleep record does show abnormal signs. This has happened frequently enough so that many EEG laboratories now obtain sleep records as a matter of routine.

Other more drastic methods, such as the slow intravenous injection of metrazol, and pitressin hydration, have been used to induce abnormalities in the EEGs of epileptics. While frequently successful, these methods have three disadvantages. First, they are time-consuming and therefore expensive. Second, they sometimes induce full-blown grand mal seizures, which is generally undersireable. Third, they tend to produce seizure-like activity in the EEGs of some persons who ordinarily have normal EEGs and who have never had any clinical signs of epilepsy.

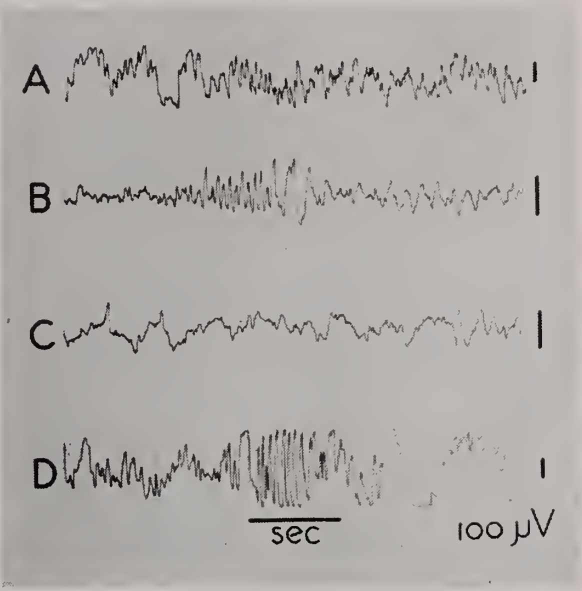

Fig. 4. Interseizure Abnormalities in the EEG in Symptomatic epilepsy. A: high voltage fast waves and slow waves, left frontal area. 12 year old girl; left frontal astroblastoma removed 8 months earlier; second operation, after this EEG, revealed multiple cysts in region of operative lesion. B: mixed fast and slow activity which appeared over all brain areas, this tracing from right motor area, 20 year old man with juvenal paresis, grand mal-type seizures. C: slow wave and spike focus, right temporal area, 42 year old man with evacuated right temporal abscess, Jacksonian seizures of left face and arm. D: high voltage multiple spikes with slow waves during sleep, left perietal area, 6 year old girl with left motor-parietal brain abscess, falls to right, right adversive seizures, blind, feeble minded.

EEG ABNORMALITIES IN PSYCHOMOTOR EPILEPSY

The typical psychomotor seizure is accompanied by high voltage 3-6 per second waves (Fig. 2, tracing G). Some of these waves may be notched or square-topped. Such activity may appear over all head areas or may be localized, usually to the fronto-temporal region.

Between psychomotor seizures 4 and 6 per second waves may be seen from time to time in the EEG and may be generalized, but are more often localized. Hyperventilation sometimes brings out abnormalties (Fig. 3, trac-

(Continued on page 406)

The Nebraska State Medical Journal

Sharp Building, Lincoln, Nebraska

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Subscription $2.50 Per Year. Single Copies 35c Each

The Publication Board does not assume responsibility for opinions expressed in original articles published in this Journal.

Manuscripts should by typewritten, double-spaced, and the original, not the carbon, submitted.

Reprints should be ordered from the printer, The Huse Publishing Co., Norfolk, Nebraska.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

Vol. 36 December No. 12

THE A.M.A. TWELVE POINT PROGRAM

1. Creation of a Federal Department of Health of Cabinet status with a Secretary who is a Doctor of Medicine.
2. Promotion of medical research through a National Science Foundation with grants to private institutions which have facilities and personnel sufficient to carry on qualified research.
3. Further development and wider coverage by voluntary hospital and medical care plans to meet the costs of illness, with extension as rapidly as possible into rural areas.
4. Establishment in each state of a medical care authority to receive and administer funds with proper representation of medical and consumer interest.
5. Encouragement of prompt development of diagnostic facilities, health centers and hospital services, locally originated, for rural and other areas.
6. Establishment of local public health units and services.
7. The development of a program of mental hygiene with aid to mental hygiene clinics in suitable areas.
8. Health education programs administered through suitable state and local health and medical agencies to inform the people of the available facilities and of their own responsibilities in health care.
9. Provision of facilities for care and rehabilitation of the aged and those with chronic disease and various other groups not covered by existing proposals.
10. Integration of veterans' medical care and hospital facilities with other medical care and hospital programs and with the maintenance of high standards of medical care.
11. Greater emphasis on the program of industrial medicine.
12. Adequate support with funds free from political control, domination and regulation of the medical, dental and nursing schools and other institutions necessary for the training of specialized personnel required in the provision and distribution of medical care.

Organization Section

CALL FOR PAPERS

Anyone wishing to read a paper at the Annual Session May 12, 13, 14 and 15, 1952, should get your name and title to R. B. Adams, M.D., 1315 Sharp Building, Lincoln 8, Nebraska. No requests will be accepted after February 1, 1952.

CONTINUOUS EDUCATION

Your Speakers Bureau Committee wishes to use this space to invite every member of the Nebraska State Medical Association to attend at least one of the regional postgraduate courses which will be held in various areas of the state from December 3 to 8, 1951.

The purpose of these courses is to take practical medical education as close as possible to the homes of all Nebraska physicians. There is no registration fee. The only cost will be the dinner. Each of the six meetings will start at 1:30 p.m. and close at about 9:30 p.m.

Courses will be held in the following towns:
Beatrice, December 3, Paddock Hotel.
Norfolk, December 4, Madison Hotel.
Grand Island, December 5, Yancey Hotel.
McCook, December 6, Keystone Hotel.
North Platte, December 7, Pawnee Hotel.
Scottsbluff, December 8, Lincoln Hotel.

Identical subject matter, including heart, cancer, obstetrics and ACTH, will be discussed at each of the meetings, which are in reality one-day state medical meetings.

Papers will be presented by the four outstanding guest faculty members from Illinois and Pennsylvania. Members of the guest faculty are:

Dr. Stuart Abel, Northwestern University Medical School, Chicago, Illinois.

Dr. Max Cutler, Director, Chicago Tumor Institute, Chicago, Illinois.

Dr. Richard J. Meyer, Director, Medical Consultant Service, Armour Laboratories, Chicago, Illinois.

Dr. Joseph Vander Veer, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania.

Another feature of the courses is the clinic which will be held from 3:30 to 5:30. At these clinics, patients will be discussed who have a problem relating to one of the above fields. Adequate time has also been set aside for question and answer periods.

During the middle of November you received a program and reservation card. Your committee urgently requests that you return this card to the headquarters office as soon as your plans are made to attend one of the courses. This is extremely necessary in order that the proper arrangements can be made with each of the six hotels. Your cooperation will be much appreciated.

Since these regional courses represent a new approach to the continuous education program in Nebraska, your attendance and enthusiasm for them will, of course, be the deciding factor in whether or not they are continued in future years. The committee hopes that a large percentage of members will attend. If you have not already done so, you are invited to make your plans now to attend the course nearest your home.

PUBLIC RELATIONS PAMPHLET

The Public Relations Committee of the Nebraska State Medical Association earlier in the fall sent each county society secretary and extended PR Committee member a pamphlet entitled, "Suggested Public Relations Programs for County Medical Societies."

This pamphlet contains 11 projects which can be adopted and carried on by county medical societies. Perhaps not all of them are practical for every county society. Nevertheless, most of them are applicable to any county medical organization. For this reason, the Public Relations Committee has asked that the extended members of the committee assume the responsibility of activating them at the county level.

The 11 projects deal with the following topics: 1. Newspaper and Radio Advertising 2. Disaster Committee. 3 PR Meetings (in conjunction with county society meetings). 4. Interprofessional Committee. 5. Assurance of Medical Care for all. 6. Work with School Children. 7. Alliance with Press and Radio. 8. Medical Assistants Organization. 9. Emergency Calls. 10. The Auxiliary. 11. Voluntary Health Insurance.

Your committee asks that every member assist in and encourage the adoption of those plans that are appropriate for his particular society. The committee feels that when each county society has adopted those projects pertinent to it, the medical public relations problem in Nebraska will have been largely solved.

DECEMBER CRIPPLED CHILDREN'S CLINICS

December 8—McCook, St. Catherine's Hospital, C. Fred Ferciot, M.D., or W. W. Bartels, M.D. and Charles Tompkins, M.D.

December 15—Grand Island, St. Francis Hospital, W. R. Hamsa, M.D. or L. S. Campbell, M.D. and G. E. Stafford, M.D.

News and Views

About one-third of the old age assistance cost in Otoe county in October was for medical care, according to County Welfare Director Paul Radda.

Total cost of the program for the month was $14,781.60, with $4,127.13 of that amount spent on medical, hospital and nursing home care.

The OAA medical costs included $624 for doctor's home or office visits, $225 for surgery, $795.28 drugs, $792.25 hospital and $2,490.60 nursing home care.

The American Board of Obstetrics and Gynecology announces the election of Dr. John L. Parks of Washington, D.C., as a member and Director of the Board. Dr. Parks succeeds Dr. Joseph L. Baer, who has been Vice President of the Board for over twenty years and who has resigned.

Joseph O. Burger, Omaha, has been named Executive Director of the Nebraska Blue Cross-Blue Shield Plans. He succeeds J. H. Pfeiffer, who retired October 18 after serving as Executive Director of the hospital care plan since its organization in 1939, and Executive Director of the Nebraska Blue Shield Plan since it was organized in 1945.

Mr. Burger, treasurer and attorney for the Blue Cross Plan since 1939, was named Assistant Director January 1, 1951.

Dr. H. C. Pedersen, a former Fremonter, died suddenly October 29 in Chico, Calif.

Dr. Pedersen practiced medicine at Dannebrog before moving to Fremont, where he lived for about 15 years.

Dr. E. G. Barnhart, 67, retired physician and president of Barnhart Press, died Thursday night, Nov. 1, at his home in Omaha.

Dr. Barnhart was a graduate of Creighton College of Medicine. He retired from medical practice in 1933.

Dr. Rudolph J. Pauly has been appointed director of the pharmacy division of the Sterling-Winthrop Research Institute. Formerly assistant director of the pharmacy division, Dr. Pauly replaces Edward D. Davy, who has retired.

Dr. Pauly received a B.S. and M.S. at Whitman College, Oregon, where he was later assistant professor, and a Ph.D. at the pharmacy school of the University of Wisconsin.

In an address to the Scientific Assembly of the District of Columbia Medical Society, Dr. Louis H. Bauer, President-elect of the American Medical Association expressed the view that the medical profession must be brought "100% behind the voluntary health insurance program."

"Too many physicians are indifferent and some even antagonistic toward it," he said, adding, "time is running out, and unless we move fast, the solution will be out of our hands."

Students of the University of Nebraska College of Medicine were guests of Eli Lilly and Company on October 14, 15 and 16, 1951.

During their visit, they made a thorough inspection of the laboratories including the research laboratories, replica of the original laboratories, and the biological laboratories at Greenfield, Indiana, where demonstrations were made showing the production of biological products.

A.M.A. REVEALS KREBIOZEN'S FAILURE AS A CANCER CURE

The Committee on Research of the Council on Pharmacy and Chemistry of the American Medical Association reported October 26, that trial of krebiozen, the so-called cancer drug, "fails to confirm the beneficial effects" claimed last March by Dr. Andrew C. Ivy, Chicago physiologist and vice president in charge of the professional schools of the University of Illinois.

The committee's long-awaited report was made after a thorough investigation of the drug, which is said to be extracted from horse serum after the horses have been inoculated with an undisclosed substance. The drug, described as a white powder soluble in water, is alleged to have been discovered about three years ago by Dr. Stevan Durovic, former Yugoslavian physician, who is now living with his brother, Marko, an attorney, in Kenilworth, a Chicago suburb. Dr. Durovic came to this country from Argentina.

The Committee on Research of the A.M.A. council is composed of 10 outstanding research men, all physicians, and it was aided in the investigation by a subcommittee of four Chicago cancer specialists—Dr. Dwight E. Clark, professor of surgery, University of Chicago; Dr. Peter A. Nelson, assistant clinical professor of surgery, Stritch School of Medicine, Loyola University; Dr. P. Shubik, cancer coordinator, Chicago Medical School, and Dr. James P. Simmonds, professor emeritus of pathology, Northwestern University. This subcommittee reviewed all the accumulated data.

The Committee on Research summarized the lengthy 42-page report in these conclusions:

"1. Case histories of 100 patients with cancer treated with a secret remedy, krebiozen, were obtained from seven independent sources. These histories were carefully reviewed by a subcommittee.

"2. Ninety-eight patients were reported as failing to show objective evidence of improvement.

"3. Two patients showed some evidence of temporary improvement coincident with krebiozen therapy. In one patient, this was apparently fortuitous; in the other, the major lesions showed continued rapid progression.

"4. Forty-four of the 100 patients treated have expired up to the time of the writing of this report.

"5. Krebiozen failed to show any discernible histologic effect upon tumor in the group of patients from whom serial biopsies or autopsy specimens were obtained.

"6. These findings fail to confirm the beneficial effects reported by Dr. Ivy and his associates."

The committee's document stressed the fact that the American Medical Association was making the report as a public service.

In submitting the schedule, Mrs. Florence Hanrahan, Chairman, NSNA Private Duty Section, writes:

The fee schedule has not been changed since October 1, 1949. Doctors will realize that the $1.50 an hour fee is certainly far less than other occupations are receiving that require less technical training and ability.

We sincerely appreciate your cooperation in this matter, and trust that doctors will interpret this change objectively to patients requiring the services of a private duty nurse.

NEBRASKA STATE NURSES' ASSOCIATION FEE SCHEDULE

FOR PRIVATE DUTY NURSES

December 1, 1951

Increase fee schedule from $1.25 to $1.50 an hour for eight-hour duty, making it read:	
General, Medical, Surgical and Obstetrical Cases	$12.00
Communicable Diseases, Alcoholic, Mental and Narcotic (on doctor's diagnosis)	13.00
Multiple Nursing (nurse not to care for more than three patients):	
2 patients, each	8.50
3 patients, each	7.50
Hours—Eight consecutive hours constitute a day's or night's work:	
Each additional hour or fraction thereof over eight hours (not to exceed 12 hours in any 24-hour period), per hour	1.50
(Nurse will work only one shift in 24 hours).	
Fee for Part of Day:	
4 hours or less	6.00
Any part of an 8-hour day in excess of 4 hours	12.00
Cancellation — If the order for the nurse is found cancelled after she has arrived, a fee of $2.00 is expected.	
Hourly Nursing—(Not to exceed four hours):	
First hour, or fraction thereof	3.00
Each additional hour or fraction thereof	1.50
Specific Services — (Administration of hypodermics, etc):	
Hourly rates are charged.	
Relief—Private duty rates are to be paid for relief in hospitals, clinics, or offices, for the full period of relief.	
Travel — By ambulance, train or air with patient. The regular eight-hour fee for days involved should be charged. If more than 8-hour service is involved without rest, rate should be hourly charge, not to exceed $25.00.	
(No change in other information concerning travel or local transportation).	

The Woman's Auxiliary

The Lancaster County Medical Auxiliary met at the St. Elizabeth hospital nurses' home November 5, 1951.

Speaking to the members of the Auxiliary on Nurse Recruitment, were Mr. Merrill Smith, Secretary of the Nebraska Medical Association, Mrs. C. F. Ferciot, State Chairman of nurse recruitment and Mrs. L. V. Gibson, Chairman of county nurse recruitment.

Preceding the meeting and program, a sandwich luncheon was served with Mrs. R. A. Youngman as chairman of the hostess committee.

MRS. JEROME RITTER, Pubicity.

Eleven members and a guest, Miss Gloria Pinney, were present for the meeting of the Adams County Medical Society Auxiliary, held at the Hastings State Hospital on Wednesday evening, November 7.

A short business session was conducted by Mrs. Carl Gouldman. After adjournment, most of the women attended the program at the junior high building in connection with the formal opening of the Nebraska Mental Hygiene Clinic.

MRS. L. W. RORK, Publicity.

Otoe County Medical Society Auxiliary met for the October dinner and business meeting Tuesday, October 23, at the Hotel Grand. Dr. C. R. Williams is president of the Medical Society.

Mrs. Glen Burbridge, county auxiliary president, presented Mrs. B. R. Bancroft of Kearney, president of the state auxiliary, who outlined the aims and programs for the coming year.

Dr. W. C. Kenner, state counselor for this district, spoke of the management and routine of the camp for diabetic children which was held this summer at Camp Catron. He urged the local medical men and their wives to assist at the camp which is sponsored by the diabetic committee of the State Medical Association.

Incoming president of the Auxiliary is Mrs. R. C. Fenstermacher of Auburn.

Nebraska State Department Of Health

NEWS NOTES

The newly elected officers of the Nebraska Public Health Association are:

President Elect—Lewis E. Harris, Director of Harris Laboratories, Lincoln, Nebraska

Vice President—C. B. Kennison, Sanitarian, Grand Island, Nebraska

Secretary—Mrs. Grace Barmore, Lexington, Nebraska

Treasurer—Mrs. R. B. Willard, Director Western State Laboratory, Scottsbluff, Nebraska

Mr. R. M. Babcock was installed as President for the coming year.

The Section Chairmen elected by the different sections are:

Health Officers—J. B. Redfield, M.D., North Platte

Sanitarians—C. W. Fahrenbach, State Department of Health

Laboratories—Allan E. Johnson, State Department of Health

Vital Statistics—Albert G. Kleman, Beatrice, Nebraska

Safety—Jack Steele, College of Agriculture

Nursing—Martha Ronayne, Lincoln-Lancaster Co.

Health Education—S. I. Fuenning, M.D., University of Nebraska

Haven Emerson, M.D., Professor Emeritus, School of Public Health, Columbia University, New York, was the featured speaker at the first general session of the Nebraska Public Health Association Convention meeting in Hastings, November 5 and 6.

Dr. Emerson, noted lecturer and author, spoke on "Local Health Organization." He pointed out that the first professional group to endorse Local Health Organization was the American Medical Association, followed by endorsement by the American Public Health Association. Dr. Emerson said, "The public health department is a department of preventive medicine, and is concerned with community problems rather than with those of the individual. Public health departments are interested in learning what is responsible in causing disease rather than the actual care of the sick. Each community has its own problems to work out, and the local health unit is a definite advantage over a general supervisory unit."

X-RAY UNITS AT WORK

The chest x-ray units owned and operated by the State Health Department have been working continiuously since the beginning of the program launched in 1944.

All counties of the state have been covered once, and the units are well on their way through the second visit.

The Transportable unit has been working in the Southeast part of the state, including Otoe, Nemaha, Richardson, Pawnee, Johnson, and Gage counties, with Saline, Jefferson, Thayer, and Fillmore counties to follow:

The Mobile unit has been working in the Northeast section of the state since the first of the year. Burt, Dakota, Dixon, Cedar and Knox counties were surveyed with Boyd, Holt, Antelope, Pierce, Wayne, and Madison counties to follow:

A number of special surveys have also been completed. These are: State Fair, University of Nebraska, Nebraska Wesleyan, Union College, Men's Reformatory, Nebraska State Home at Beatrice, Peru, Chadron, Kearney, Hastings, and Midland Colleges, and the Cornhusker Ordnance Depot.

It appears that a higher participation will be obtained on the second visit than on the first. However, the record of 62.8 per cent of the eligible people participating by having x-rays taken, is held by Thomas County, made in the first visitation.

Know Your Blue Shield Plan

The names of fifty physicians have been added to the list of Blue Shield Participating Physicians in the last three months. At present, participants number 1,160, representing about 93 per cent of the practicing physicians in Nebraska.

Participating Physicians who do not have Blue Shield plaques, Schedules of Benefits, or literature dispensers may secure them by sending a request for these items to: Blue Shield Plan, 518 Kilpatrick Building, Omaha 2, Nebraska.

As a result of the Special Non-Group enrollment period during October, more than 2,500 Nebraskans joined Blue Cross-Blue Shield. Many of these enrolled on the recommendation of their physicians, who helped to publicize the campaign. Non-Group membership is still available to persons under age 65 who work where there are fewer than five employees.

Occasionally the question is raised as to why Blue Shield requests films to verify fractures. These films are needed so that a fair and correct allowance may be made for the services rendered. In some cases, "shaft fracture"—especially of the radius—is reported—but the film reveals that the fracture is actually a "Colles." Since there is a difference of $25 in the allowances for these, the Medical Director must review the films to substantiate the allowance in each case.

Reminder: Doctors and their families need Blue Cross-Blue Shield protection, too. Any physician and the members of his office staff may enroll as Direct Pay members, on a quarterly, semi-annual or annual basis. If the doctor has four or more employees on his payroll, and the group enrollment quota is met, he may organize an Employee Group. Since Group rates, on monthly payroll deduction, are lower than Direct Pay dues, it is to the doctors' employees' advantage to form a group.

NEBRASKA STATE MEDICAL SERVICE

BALANCE SHEET

September 30, 1951

Assets:		
Cash in banks	$242,770.24	
Premiums in process of collection	21,647.65	
U. S. bonds	409,950.50	
Accrued interest on U. S. bonds	3,056.05	
Total Assets		$677,424.44
Liabilities, Reserves and Surplus:		
Accounts payable, Blue Cross	$ 13,323.62	
Accrued payroll taxes	224.40	
Claims reported but unpaid (pending)	8,643.50	
Unearned premiums	112,354.66	
Total Liabilities		$134,546.18
Reserves for:		
Unreported claims	$131,498.32	
Maternity care	187,992.00	
Bonuses	2,400.00	
Collection losses	1,500.00	
Premium tax liability	5,386.11	
Total Reserves		$328,776.43
Unassigned Surplus		$214,101.83
Total Liabilities, Reserves, Surplus		$677,424.44

STATEMENT OF INCOME AND EXPENSE

September, 1951

	September	9 Months to Date
Income:		
Dues	$156,793.58	$1,362,896.64
Enrollment fees	1,003.00	12,574.00
Total Earned Income	$157,796.58	$1,375,470.64
Claim Expense:		
Claims paid	$111,956.00	$1,100,206.25
Less:		
Unreported, 8-31-51	130,669.00	128,517.12
Pending, 8-31-51	9,022.50	1,944.00
Plus:		
Unreported, 9-30-51	131,498.32	131,498.32
Pending, 9-30-51	8,643.50	8,643.50
Total Claims Incurred	$112,406.32	$1,109,886.95
Administrative Expense:		
Collection expense	$ 45.50	$ 278.03
Professional—Medical	250.00	2,253.00
Auditing expense	------	840.00
Advertising——B.S. only	------	449.23
Printing	------	5,991.28
Office supplies	------	23.25
Postage	------	172.82
Dues	165.80	1,418.89
Taxes and licenses	553.74	6,540.47
Payroll taxes	4.00	54.00
Payment to B.C.—		
Regular	12,567.15	109,974.84
Advertising	631.47	6,200.83
Bonus expense	300.00	2,700.00
Conferences and meetings	—10.17	2,820.99
Salary, Secretary	416.66	3,750.00
Actuarial survey expense	125.00	125.00
Miscellaneous	5.00	182.22
Total Administrative Expense	$ 15,054.15	$ 143,774.85
Gain or Loss From Underwriting	$ 30,336.11	$ 121,808.84
Miscellaneous Gain or Loss Items:		
Plus—		
Miscellaneous Income	------	460.25
Interest on U. S. bonds	625.00	2,406.27
Increase or decrease in maternity reserve	—11,430.00	—33,900.30
Net Transfer to Surplus	$ 19,531.11	$ 90,775.06
Surplus, 8-31-51 and 12-31-50	$194,570.72	$ 123,326.77
Surplus, 9-30-51	$214,101.83	$ 214,101.83

CASE REPORT

September, 1951

Number of services rendered	3,823
Females	2,322
Males	1,501
Subscribers	1,429
Dependents	2,394

MEMBERSHIP SUMMARY

September, 1951

Groups enrolled during September	63
Groups cancelled during September	32
Number of active groups, October 1, 1951	3,165

	Subscribers	Dependents	Participants
Membership, September 1, 1951	66,951	93,062	160,013
Additions	1,119		
Less terminations	943		
Plus reinstatements	40		
Net Gain	216		
Membership, October 1, 1951	67,167	93,362	160,529

Deaths

Stanley G. Zemer, M.D., Lincoln. Born in Ohio in 1883. Graduate from the University of Chicago in 1914. Came to Lincoln in 1916, when he entered the practice of eye, ear, nose and throat. During his life time Dr. Zemer enjoyed an enviable reputation in his community having served in many capacities in civic and professional affairs. He was a member of the Lincoln School Board since May, 1949. Died October 20, 1951. Surviving are his wife, two daughters and a son.

P. H. Priest, M.D., Omaha. Born in 1895. Graduated from the University of Nebraska Medical College in 1916. Located in Harrison where he practiced five years prior to coming to Omaha. Dr. Priest was a member of the Omaha-Douglas County Medical Society and the Nebraska State Medical Association and the American Medical Association. He served in the Army Medical Corps during World War I. Died November 1, 1951. Surviving are his wife, a brother, and a sister.

Edward L. McCrea, M.D., Table Rock. Born in Missouri in 1865. Graduated from University Medical College at Kansas City in 1900 and immediately located at Table Rock where he lived until the time of his death October 15, 1951. Dr. McCrea was one of the pioneer physicians and surgeons in Nebraska and enjoyed the love and respect of the entire area. He was active in civic and church affairs, serving the community regardless of his own comfort or convenience. He was one of the crusaders for good schools in the mid-west area. Surviving are his wife, a daughter, and a son, Dr. L. E. McCrea of Philadelphia, Pa.

W. A. Shreck, M.D., Holdrege. Born in Indiana in 1864. Attended Rush Medical College in Chicago for one year before going to the University of Louisville in Kentucky, where he was graduated in March, 1896. He located in Phelps County the following year and remained in practice there until 1949 when following injury he retired. Dr. Shreck was one of the most prominent members in his community. He served in civic, industrial and financial activities of Bertrand and Holdrege for many years. He died October 23, 1951. Surviving are his wife, two sons, one of whom is Dr. Horace W. Shreck now located in the Canal Zone in Panama.

Lincoln Riley, M.D., Wisner. Born in Illinois in 1865. Graduated from University of Iowa in 1888. Came to Wisner in 1888, where he remained in practice until he died October 14, 1951. During his lifetime, Doctor Riley was well known throughout the state for his professional ability as well as his unusual marksmanship. He served in the Medical Corps of the Army during the Mexican War and also during World War I where he was a captain in the 2nd Regiment 91st Division in Atlanta Georgia. Surviving Dr. Riley are a daughter, two sons, Dr. Kirk Riley, Wuskogee, Oklahoma, and Dr. Louis C. Riley of Los Angeles.

Human Interest Tales

Communications bearing human appeal are solicited. They should be addressed to The Editor, Nebraska State Medical Journal, 111 So. 39th, Omaha.

Leaving Henderson to locate in Wisconsin is Dr. Wendell D. Hamlin.

Dr. F. J. Clark returned to Stuart after practicing in Gregory since January.

Dr. Vernon L. Branson, Beatrice, was elected to fellowship in the American Academy of Pediatrics.

Dr. George B. McMurtrey announces the opening of his office in Omaha, practice limited to surgery.

Dr. E. G. Surber was speaker at the Norfolk Woman's club on "Modern Trend in Medicine," in October.

Dr. Donald Dickson of Albion has accepted a position with the New York State Department of Health.

Dr. Houghton Elias of Lincoln attended the American College of Surgeons meeting, in San Francisco.

Dr. T. Laurin Gritzka of Talmage received the DeMolay Legion of Honor degree at Portland, Ore., in October.

Dr. Frank T. Herhahn of Scottsbluff attended a two weeks refresher course in surgery in Chicago during October.

Dr. Clyde L. Kleager announces the opening of his office at Hastings, Nebr., practice limited to general surgery.

Osceola has a new doctor. Dr. R. E. Klaas has started his practice in the offices of the late Dr. Earl A. Gullberg.

Dr. Charles M. Wilhelmj of Omaha spoke at the fall meeting of the Missouri Neuropsychiatric Society in St. Louis.

Dr. P. Bryant Olsson of Lexington is attending postgraduate courses at the Cook County Graduate School of Medicine.

Dr. Peyton T. Pratt and Dr. William E. Graham announce their association in practice at 528 Medical Arts Building in Omaha.

Dr. J. Harry Murphy and Dr. John M. Thomas of Omaha attended the Academy of Pediatrics meeting in Toronto, Ont., Canada.

Dr. and Mrs. George Harrison Gilmore, long time residents of Cass county, celebrated their golden wedding anniversary in October.

Dr. Byron B. Oberst of Omaha was guest speaker at the October meeting of the PTA. His topic was "Keeping Your Child Mentally Fit."

Drs. Ralph Luikart, E. A. Connolly and John Freymann, all of Omaha, attended the American College of Surgeons meeting in San Francisco, California.

Dr. Fay Smith of Imperial is a candidate for alternate delegate-at-large to the 1952 Republican National Convention to be held in Chicago.

Dr. C. T. Frerichs of Coleridge has been given a discharge from the navy. He has accepted a fellowship at the Mayo Clinic in Rochester, Minn.

Drs. James D. Bradley and Leroy W. Lee of Omaha addressed the Professional Men's Club. The subject: "Medical Problems and Public Relaitons.

Dr. Morris Margolin of Omaha has been elected a member of the national committee on detection and education of the American Diabetes Association.

The relationship of the medical profession to the community of Grand Island was the topic of a talk before the Rotary Club by Dr. Wlliam M. McGrath.

Dr. R. P. Westover is now Chief Medical Officer for the Veterans Administration Regional Office at Boise, Idaho. Dr. Westover was in general practice in Plattsmouth for about 27 years.

CLINICAL ELECTROCEPHALOGRAPHY

(Continued from page 399)

ing F), but the most frequently observed interseizure sign in the presence of spikes over the temporal area, especially in the vicinity of the tip of the temporal lobe while the patient is asleep (Fig. 3, tracing G). Most psychomotor seizures are of the temporal lobe origin. Some investigators believe that most phychomotor seizures are simply focal seizures which happen to produce motor automatisms. There is a good deal of evidence to support such a view.

EEG ABNORMALITIES IN SYMPTOMATIC SEIZURE STATES

Some individuals develop seizures following brain injuries or insults of various kinds. In many of these cases localized convulsions, or generalized convulsions following a Jacksonian march, may ensue. In some cases the resultant seizures may be so like those seen in idiopathic epilepcy as to be indistinguishable by even a trained observer. In such cases proper diagnosis depends upon the case history and the EEG and other clinical tests.

The typical EEG finding in syptomatic cases is the presence of signs of abnormality in the vicinity of the epileptogenic lesion. These signs may be of any kind: spikes, slow waves, fast waves of high voltage, spike-and-wave complexes, or any combination of these (Fig. 4). The outstanding feature of such records is the localization of such abnormalities to one area. Sometimes symptomatic epilepsy is not focal however, but rather diffuse in origin, due to diffuse damage to the brain (for example see Fig. 4, tracing B).

Tuberculosis Abstracts

OBSTACLES TO THE ERADICATION OF TUBERCULOSIS

There has been widespread publicity and jubilation over the drop in the tuberculosis death rate from the peaks of about 200 deaths per 100,000 population at the turn of the century to the provisional death rate of 26.1 for 1949.

It is good news! Unfortunately many have the impression that tuberculosis is a problem that is already solved. Yet tuberculosis is the principal communicable disease for the world as a whole. It is estimated that between 3,000,000 and 5,000,000 people die each year throughout the world from tuberculosis. Even in the United States, it causes nearly 40,000 deaths per year. It is the chief cause of death in the United States in the important childbearing and child-rearing ages of 15 to 34. Because so many people die from tuberculosis in the prime years of life, it causes a potential loss of years of life approximately equal to cancer, and not far behind the combination of diseases called "heart diseases." Today, more cases of tuberculosis are known than ever before, due largely to our improved case-finding programs, and there is good reason to believe that the death rate is dropping faster than the prevalence of tuberculosis. Although eradication is the objective of all voluntary and official health agency workers concerned with the tuberculosis problem, eradication is still a long way off.

There are many obstacles to be overcome — obstacles closely related to the four basic activities in tuberculosis control, namely, case finding, treatment, increasing human resistance to tuberculosis, and research. For these activities, numerous tools and techniques are needed. Some of these are an adequate number of trained personnel, adequate physical facilities, health education, laws and regulations, record systems and statistical analyses, and adequate financing.

The chest x-ray of the apparently well adult is probably the most important aspect of case finding. While the annual physical examination, including a chest x-ray, for every adult is still advised, a more practical goal from the standpoint of tuberculosis control is the annual chest x-ray without the complete physical examination. In a series of fast-tempo, short period, large city chest x-ray campaigns since 1947, over 4,000,000 people have been x-rayed. This is a remarkable undertaking. In these campaigns, about 0.3 per cent significant tuberculosis has been discovered and most of them were previously unknown to the health departments. Ideally, there should be adequate facilities for every adult to have a free chest x-ray every year in his own community.

Treatment properly includes all aspects of supervision and guidance of the patient and his family from diagnosis through to recovery or fatal termination. This, then, involves supervision by the health officer and public health nurse; assistance to the family by social workers and welfare authorities; medical therapy; and the whole process of rehabilitation. As with other communicable diseases, an adequate local health department is necessary to conduct such a program.

Supervision of tuberculosis patients is possible only if there are public health nurses available to give this supervision. The public health nurse is the G.I. on the firing line. She must be directed by a competent health officer, and there must be adequate community facilities for hospitalization of the tuberculosis patient and for assistance to his family. But the public health nurses are the combat troops who make or break a tuberculosis control program. It is estimated that about 5,000 more public health nurses are needed for even a minimum public health nursing program.

There is a serious shortage of tuberculosis hospital beds and there is also a serious shortage of the whole gamut of the army of personnel necessary to the smooth running of a tuberculosis hospital. From the standpoint of personnel and of newer developments in therapy, it is increasingly desirable to locate tuberculosis hospitals in proximity to medical centers in the city.

The public and the medical profession still have not accepted universally the fact that tuberculosis is a communicable disease and must be treated as a public health problem. Too often the means test is applied before a tuberculosis patient is permitted to enter a hospital and before welfare assistance is granted to his family.

Another obstacle to more rapid control of tuberculosis is the frequency with which patients leave hospitals against medical advice. Two factors seem to be responsible. The first is the matter of communities providing inadequate assistance to the family. The second factor is failure on the part of hospital personnel to consider adequately the personal and emotional problems of tuberculosis patients. Rehabilitation services are needed also to bridge the gap between the tuberculosis hospital and full employment. Another obstacle in the field of treatment is the lack of a completely satisfactory antibiotic or chemotherapeutic agent. Streptomycin and para-aminosalicylic acid combined have proved very helpful in certain types of tuberculosis. However, the tubercle bacillus readily develops resistance to it.

There are two main aspects to tuberculosis control through increasing resistance to tuberculosis. Probably, the most important factor in the nonspecific category is adequate nutrition. There are still many people who lack or fail to utilize the modern knowledge of nutrition or are too poor to provide adequate nutrition for themselves and their families.

With regard to specific active immunization against tuberculosis, the only accepted vaccine available is BCG (Bacillus of Calmette-Guerin). The vaccine is safe and there is evidence that the vaccine is helpful as a supplement but it has definite limitations. There is great need for a better vaccine — one which may be given to everybody; one which is not only safe but without severe reactions; preferably one consisting of killed micro-organisms; and one which produces a solid immunity.

All of the obstacles mentioned indicate the need for further research concerning all aspects of tuberculosis — further clarification of its epidemiology; better methods of health education and motivation; increased knowledge of the psychiatric problems of the tuberculous patient and his family; better methods of medical and surgical treatment; improved programs of rehabilitation; the development of a better anti-tuberculosis vaccine; and more precise

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knowledge of the tubercle bacillus itself — its genetics, physiology, chemical composition, and immunological properties of its various chemical components.

The present world crisis is a threat to the eradication of tuberculosis, as well as to every other ideal of the free peoples of the world. Millions of our citizens will have intimate contact with others all over the globe in the years to come, including areas of very high prevalence of tuberculosis. Such mixing will be on an unprecedented scale and will occur through troop movements, the program of technical assistance to backward areas, through service in the diplomatic corps, and in commercial ventures,

In spite of the uncertain days ahead, there is reason to believe, however, that eventually the obstacles besetting the free peoples of the world, as well as the obstacles in the control of tuberculosis, will be overcome and we shall finally see the day when the dreadful and unnecessary scourge of tuberculosis is a thing of the past.

—James Perkins, M.D., A Lecture Endowed by Michigan Tuberculosis Association, December 4, 1950.

PENICILLIN REDUCES RHEUMATIC FEVER RECURRENCES

Recurrences of rheumatic fever in rheumatic subjects have been drastically reduced as a result of penicillin therapy, it was reported in the August 18 Journal of the American Medical Association.

The results were made known in a joint report of Drs. Benedict F. Massell, George P. Sturgis, Joseph D. Knobloch, Richard B. Streeper, Thomas N. Hall and Pliny Norcross, associated with the House of the Good Samaritan (Children's Medical Center), Boston.

The article was based on a study of 40 rheumatic fever subjects with a total of 46 infectious episodes. Thirty-four persons had one infection each, and six had two each.

The report disclosed that only two recurrences of rheumatic fever occurred in 34 hemolytic streptococcic infections treated with penicillin. In contrast, there were six recurrences of the 12 infections not treated.

"However, because of the relatively small number of cases involved in this study and because of the variety of serological groups and types of streptococci associated with the infections, final conclusions are not yet warranted," the reported stressed.

Therapy was begun as soon as possible after onset of the infection, the article stated, with the subjects receiving either daily oral or intramuscular doses of penicillin, ranging from 120,000 to 1,000,000 units. The period of treatment was 10 days.

In the instance of the two patients who suffered recurrences despite treatment, the report pointed out that the reason for the recurrence cannot be determined without further study.

"It is well known that rheumatic fever is a repetitive disease and that with each new episode the degree of cardiac damage may be increased," the article declared.

"Furthermore, the mortality from first attacks of rheumatic fever is relatively low, most deaths from rheumatic heart disease, at least in children and young adults, being traceable directly to recurrences of active rheumatic fever.

"Hence, anything that can be done to reduce the incidence of such recurrences should contribute toward the lowering of the mortality and the reduction of the crippling effects of this disease."

The article warned that "prompt penicillin therapy of streptococci infections is not recommended as a substitute for the use of continuous prophylactic measures in persons who have had one or more attacks of rheumatic fever."

KOREAN WOUNDED HAS BETTER CHANCE THAN VICTIM OF CIVILIAN ACCIDENT

A wounded member of the United Nations in Korea entering a military hospital has a better chance of survival than a civilian accident victim who is taken to a large municipal hospital.

This is the opinion of Major General Edgar Erskine Hume, chief medical officer of the United Nations Forces in Korea.

Writing in the August 4 Journal of the American Medical Association, General Hume said, deaths among hospitalized service men in Korea have run at about half of the record low rate in World War II. In that war, about 955 out of every 1,000 men brought to a military hospital lived. whereas the Korean survival rate has risen to 975, he said.

"Municipal hospitals in large cities, those that care for the victims of ordinary accidents due to traffic, industry and the like, can hardly match these figures," he added.

He pointed out that this record has been attained despite the difficulties incident to administering a medical service to soldiers, sailors and airmen of more than a score of nations, with different languages, diets and religions.

TREAT HUMAN BITE INFECTIONS SUCCESSFULLY WITH BACITRACIN

The successful use of bacitracin in the treatment of infections resulting from human bites was reported in the Journal of the American Medical Association.

Infections from such bites are caused by bacteria both in the mouth of the biter and on the skin of the recipient of the bite, according to Irving A. Levin and Alfred B. Longacre, of the Louisiana State University School of Medicine, New Orleans.

Because the external characteristics of human bites are so misleading that patients frequently neglect them until inflammation has occurred, serious infections and crippling effects often result. The most frequent human bites occur on the back of the hand and are incurred when the closed fist strikes the teeth of an opponent in a fight.

The report covered 27 persons suffering from infections resulting from human bites. Eleven bites were on the back of the hand, eight on the fingers, one on the palm of the hand, and the others on various parts of the body.

83rd ANNUAL SESSION, April 30 through May 3, 1951

The Nebraska State Medical Journal

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

Vol. 36 Norfolk, Nebraska, January, 1951 No. 1

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Harding, F. E.: West. J. Surg. Obst. & Gynec. 52:31 (Jan.) 1944

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Neustaedter, T.: Am. J. Obst. & Gynec. 46:530 (Oct.) 1943.

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Glass, S. J., and Rosenblum, G.: J. Clin. Endocrinol. 3:95 (Feb.) 1943

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Perloff, W. H.: Am. J. Obst. & Gynec. 58:684 (Oct.) 1949.

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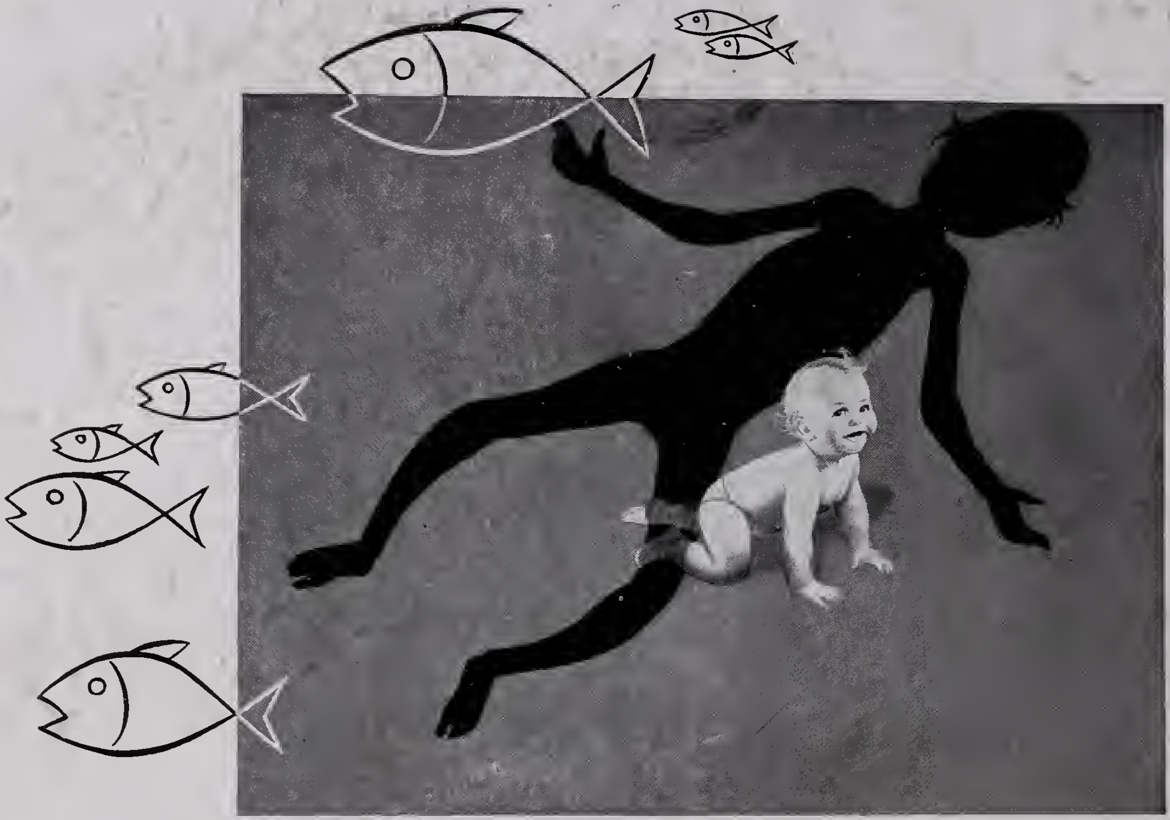

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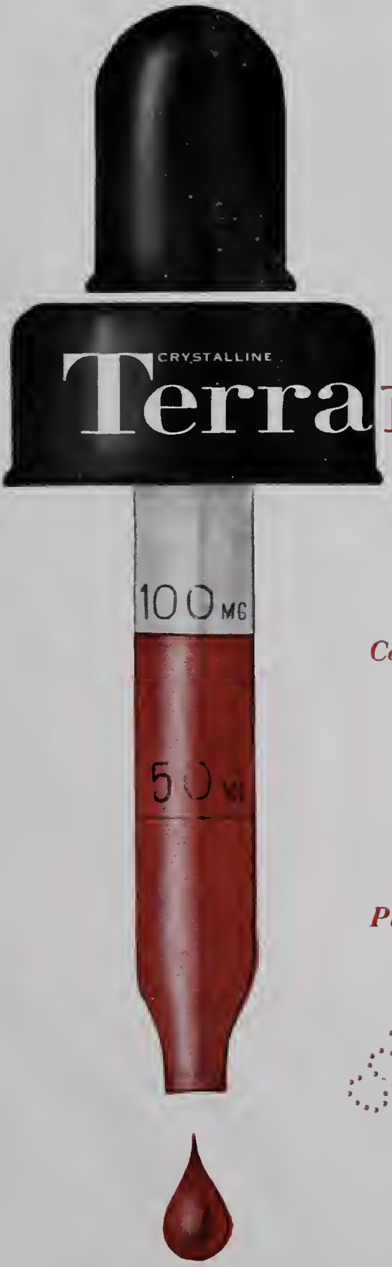

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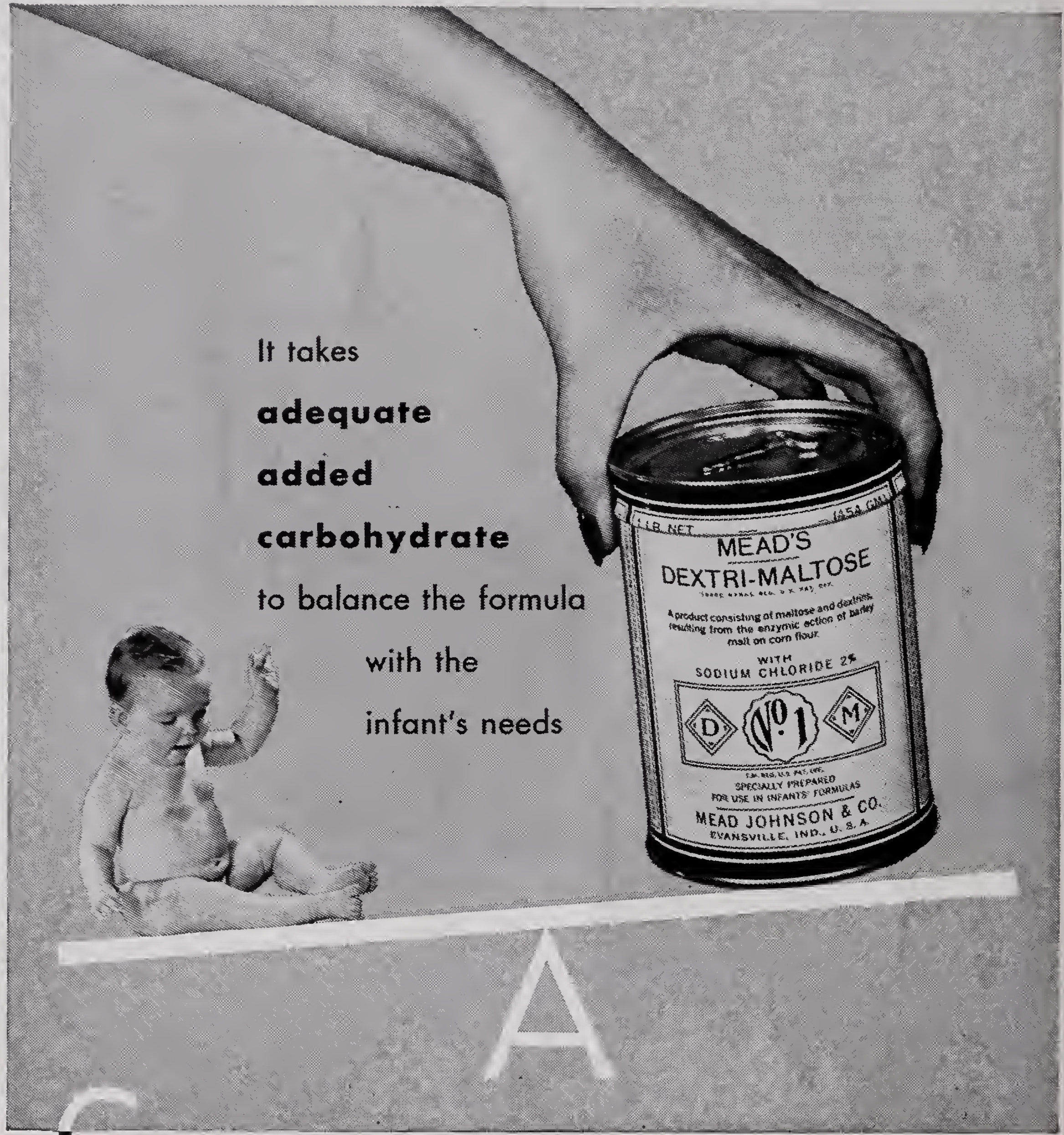

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